

# Psychological Abstracts

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## CONTENTS

General .....	213-231
Sensation and Perception .....	232-248
Feeling and Emotion .....	249-256
Attention, Memory and Thought .....	257-268
Nervous System .....	269-283
Motor Phenomena and Action .....	284-294
Plant and Animal Behavior .....	295-315
Evolution and Heredity .....	316-328
Special Mental Conditions .....	329-349
Nervous and Mental Disorders .....	350-377
Social Functions of the Individual .....	378-400
Industrial and Personnel Problems .....	401-421
Childhood and Adolescence .....	422-439
Educational Psychology .....	440-480
Biometry and Statistics .....	481-486
Mental Tests .....	487-507

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# PSYCHOLOGICAL ABSTRACTS

VOL. I, No. 2

FEBRUARY, 1927

## GENERAL

213. **Baldwin, J. M.** *Between two wars (1861-1921)*. Boston: Stratford, 1926. 2 v. Pp. 302; xiii + 358. \$10.00.—Volume 1 is an autobiography setting forth various incidents in the author's life at Princeton, Toronto, and Johns Hopkins. The latter third of the volume covers the author's experiences in the Great War. Volume 2 is composed of opinions, largely on political questions arising during the war, and of letters received. The material of chief interest to psychologists is found in a 12-page resumé of genetic logic, in an 18-page essay on "The Beautiful World," and in seven letters from McCosh and twenty-three from William James.—*W. S. Hunter* (Clark).

214. **Coster, G.** *Psycho-analysis for normal people*. London: Oxford, 1926. Pp. 232.—A pocket-size popular manual of analytic psychology, somewhat comparable to Hart's "Psychology of Insanity"; but approached from the standpoint of the teacher rather than from that of the psychiatrist. The introductory chapter comprises a statement of the standpoint of psychoanalysis: "What the new school of psychotherapy has discovered is a theory and a practical technique which leads directly to real self-knowledge, and through it to self-healing"; in it and the second chapter the leading concepts are outlined: "Every one recognizes the feeling of relief and relaxation that comes when conflict is resolved and ceases." "The subjects which are surrounded by pain-complexes retreat into the unconscious mind and set up conflicts there." The third chapter discusses the concept of libido, pointing out analogies with other manifestations of life-force and with the religious concept of the "Holy Spirit," and postulating the sex and power instincts as different manifestations, in free communication with each other, of the primary libido. Fear as the inhibiting agent to the free expression of libido is the subject of the fourth and fifth chapters, with a note on the important "fear of the next step"; valuable practical implications are "to train ourselves to recognize the characteristic reactions of fear in children and to deal with them sympathetically," and "to cultivate the habit of recognizing and making allowance for fear in dealing with subordinates and colleagues." The power instinct also takes two chapters; in the first special consideration is given to the undesirability of over-suppression of this instinct in children. The second considers at some length the difficult situation in which certain classes of adults find themselves with regard to achieving suitable outlets for their power urges. The chapter on the sexual instinct stresses its close relationship to creation in general, and the sense of frustration that ensues unless some form of union with the admired object is achieved. Utilization of the newly acquired knowledge of the unconscious meaning of children's behavior to guide their sex education, and some of the pathologic consequences of maladjustments in this region (e.g. kleptomania) are discussed; the part played in the homosexual-heterosexual evolution of the child by each parent also has a leading place. A short chapter on dreams is largely preoccupied with examples of the more readily analyzable type and their significance for development; a final chapter on the relations of sublimation and religion presents a detailed analytic account of the life of Jesus, with the conclusion that he both exemplified and taught principles of psychic adjustment that are only receiving more precise amplification from

psychoanalytic theory; and the work closes with a succinct statement of the universality of the sublimation phenomena.—*R. R. Willoughby* (Clark).

215. **Davies, A. E.** *Mechanism, meaning and teleology in behavior.* *Amer. J. Psychol.*, 1926, 37, 2-24.—“Students of behavior are confronted, now from one point of view and now from another, with three special problems. In the first place, behavior, from the standpoint of the mathematical sciences, is determined, and it calls for a mechanistic explanation. In the second place, from the standpoint of biology, it possesses survival-value, and thus raises the question of meaning. In the third place, from the philosophical and especially epistemological point of view, behavior, if it is creative or has meaning, can hardly avoid being thought of as having some relation to an end.”—*G. J. Rich* (Institute for Juvenile Research).

216. **DeMarco, F.** *Il libra nell' economia cerebrale.* (Balance in cerebral economy.) *Riv. di Psicol.*, 1926, 22, 123-128.—A theoretical discussion of the possibilities of better understanding the cerebral resources of an individual, not merely his language mechanisms, in order to find out in some way what types of stimuli (i.e. visual or auditory) set off these cerebral tendencies in the most efficient manner.—*T. M. Abel* (Cornell).

217. **Dorcus, R. M.** *A contact pencil for psychological use.* *J. Comp. Psychol.*, 1926, 6, 391-392.—A pencil so arranged by internal mechanism and wiring that pressure from the fingers, in writing, makes a contact so that a time-measuring apparatus at some distance can record the consumption of units of time characterizing the writing itself; cessation of writing and the great reduction of pressure by the fingers breaks the contact which also is recordable in units of time. The reviewer suggests that this device may be further modified to obtain records of amounts of pressure exerted during actual writing itself, which modification would be a boon to hand-writing experts.—*H. R. Crosland* (Oregon).

218. **Dresser, H. W.** *A history of ancient and medieval philosophy.* New York: Crowell, 1926. Pp. xii + 338.—An elementary textbook covering the period from 600 B.C. to the death of Bruno, 1600 A.D.—*W. S. Hunter* (Clark).

219. **Fernberger, S. W.** *On the number of articles of psychological interest published in the different languages (1916-1925).* *Amer. J. Psychol.*, 1926, 37, 578-581.—During the past decade the greatest number of psychological articles have been published in English, with German in second place. The combined percentage of English and German titles are usually more than 80% of the total.—*G. J. Rich* (Institute for Juvenile Research).

220. **Fries, C.** *Gestalttheorie und Erkenntnistheorie.* (*Gestalt* theory and epistemology.) *Ann. d. Phil.*, 1926, 5, 209-212.—Natural philosophy has to deal with the antagonistic views of neo-Kantian criticism and neo-vitalism. Due to this conflict no progress seems to be possible in the field of epistemology. The theory of *Gestalt* is suggested as a new point of departure. Various phenomena of nature which have a bearing on this theory are discussed.—*H. Klüver* (Columbia).

221. **Gangadharan, M. V., & Gopalaswami, M. V.** *An improved choice reaction apparatus.* *Psychol. Stud. Univ. Mysore*, 1926, 1, 65-71.—This is a device to obviate certain defects in the usual type of “choice reaction” apparatus (i.e., apparatus for timing a specific response to a specific stimulus); viz., (1) the possibility of an unnoticed temporary correct response, leading to the establishment of false associations, and (2) that of making the correct response by including it in all the responses, made simultaneously; in which the essential element of choice is eliminated. These possibilities are removed in a four-circuit apparatus (diagram presented), including three special pieces.—*R. R. Willoughby* (Clark).

222. **Haldane, R. B.** *Human experience.* New York: Dutton, 1926. Pp. xxiii + 233.—This book is intended to be an introduction to the study of pre-



vailing problems in philosophy for those interested, but not of necessity trained, in philosophical inquiry. It deals with the philosophical inquiry into the nature and meaning of human experience, and considers the mind and its relation to the objective world; also its reference to art, religion and science. The author attempts to show that the gulf between the "self" and the "non-self," and between the mind and its object, is not so definite as generally supposed. The author stresses the significance of the Particular as a limiting factor in human experience. It is distinguished sharply from what is individual, a form from which it appears to be wholly distinct. He further endeavors to show that experience manifests itself as of different grades or orders, and at different levels. It contains logically different forms that thus enter into the real world and give to that world varying aspects. The forms that so characterize the actual world, where they seem to determine its varying aspects, are founded in the ultimate nature of mind and are apparently ultimate phases in experience not capable of being reduced to anything outside mind itself. These fundamental forms fall into classes, which indicate degrees in the aspects of reality. Such classes embrace subordinate forms, such as causation, end, value, and many others, which in theory at least might conceivably be respectively exhibited as relations falling within some or other of the wider classes. The forms that are inherent in our experience thus mold the world which is disclosed in it, from standpoints that are independent but do not interfere with each other. The explanation is that in logical character they belong to different kinds of knowledge in its widest meaning. The first four chapters of the book give an orientation to the problems later to be considered. The introductory chapter deals with the problem: What does experience mean for the plain man? The second chapter is an examination of the character of this experience; the third chapter attempts to show how it goes to make up science and art; and the fourth chapter treats its Universal and Particular aspects. Chapters V to XV inclusive are short chapters expository of the particular points that arise. These chapters attempt to make plain how experience is built up, by considering such problems as: The relation of knowledge to reality; what our objective world discloses; the status of the Self in experience; how meaning enters into reality and gives it individuality; the meaning of knowledge and its relation to experience; etc. The four concluding chapters sum up the results previously set forth.—*P. H. Ewert* (Clark).

223. Klüver, H. M. Weber's "ideal type" in psychology. *J. Phil.*, 1926, 23, 29-35.—Weber does not mean just something "average" when he uses the words "ideal type," but it is evident that we have here an ideal in a logical sense, a concept derived through certain elements of experience being exaggerated. Jaspers, whose discourse concerns itself with the most general types, recognizes that M. Weber's "ideal types" are fruitful devices for various sciences, but psychological types must be founded on *Anschauung*, which is not to be brought into rational form. Such abstractions as "attitudes," "dynamic" relation of that to "world views," must rest on "originary intuition."—*T. R. Garth* (Denver).

224. Liddell, H. S. A laboratory for the study of conditioned motor reflexes. *Amer. J. Psychol.*, 1926, 37, 418-419.—A sound-proof room with constant artificial illumination is provided for the animals. The experimenter is in an adjoining room which contains the recording and stimulating apparatus, and from which he can observe the animal through a window.—*G. J. Rich* (Institute for Juvenile Research).

225. McDougall, W. Purposive experience. *Ped. Sem.*, 1926, 33, 353-364.—Examination is made of Warren's attempt to explain away all purposive experience by describing it as analyzable into sensations or other cognitive elements (*Journal of Philosophy*, vol. 13). Essentially it is a temporal sequence begin-

ning with an idea and ending with a perception of a situation corresponding to it, with accompanying kinesthetic sensations. After a running criticism of this view McDougall states that we must judge between pure associationism with its offspring behaviorism, and a purposive psychology.—*J. F. Dashiell* (North Carolina).

226. **Renshaw, S., & Weiss, A. P.** *Apparatus for measuring changes in bodily posture.* *Amer. J. Psychol.*, 1926, 37, 261-267.—The apparatus is essentially a device for recording the changes in the center of mass of the body under various stimulating conditions, in this instance a pursuit task. It consists of three parts: a stabilometer or posturograph, a pursuitmeter, and a recorder unit which is capable of taking continuous records of several hours' duration.—*G. J. Rich* (Institute for Juvenile Research).

227. **Rensi, G.** *Der kritische Materialismus.* (Critical materialism). *Symposion*, 1926, 1, 3, 269-292.—Is it true that after Kant, materialism is impossible? Rensi holds that what is essentially the old materialism is possible on the basis of the "*Kritik*," as the two views harmonize. The former should therefore be called "critical materialism." What gives nature its being is the pure *I* or consciousness—nature itself independent of any living consciousness or thought.—*P. R. Farnsworth* (Stanford).

228. **Buckmick, C. A.** *Development of laboratory equipment in the United States.* *Amer. J. Psychol.*, 1926, 37, 582-591.—Psychology is apparently making definite progress in the establishment of its laboratories, and has come into its own. It is no longer referred to as the "new psychology," nor is the use of the experimental method questioned in connection with introductory courses. It is safe to lay down the principle that the total inventory of apparatus in one of our larger universities ought to be about \$20,000 to \$30,000, and that its annual budget should be about \$1,500.—*G. J. Rich* (Institute for Juvenile Research).

229. **Sellars, R. W.** *The principles and problems of philosophy.* New York: Macmillan, 1926. Pp. xiv + 517.—The book is a textbook of philosophy. The author has endeavored to give a survey of the whole field of philosophy from its beginning. He supports the theory of knowledge called critical realism, in the domain of cosmology accepts emergent evolution, and takes a double-knowledge approach to the mind-body problem. The book contains thirty chapters divided into three parts, as follows: introduction, studies in the history of philosophy, and theory of knowledge; general ontology and cosmology; human life and values.—*J. R. Liggett* (Clark).

230. **Sengupta, N. N.** *Psychology, its present development and outlook.* *Indian J. Psychol.*, 1926, 1, 1-25.—Psychology has taken over many of the problems which were formerly casually handled, so that they are now being treated in a scientific manner. Sociology, anthropology, etc., are the gainers by this more thorough analysis. The future of psychology is in the experimental method. The problems of group-psychology are the ones that are most in need of attack.—*S. W. Fernberger* (Pennsylvania).

231. **Stewart, J. McK.** *The meeting-point of psychology and ethical theory.* *Australasian J. Psychol. Philos.*, 1926, 4, 77-90.—"I can do no more than to suggest that the central task of Ethical Theory is to make explicit in thought the nature of the power that underlies all powers; further, that in performing this task, it needs the alliance of psychology, seeing that the path which it must tread is from experience to faculty and from faculty to form or ideal."—*S. W. Fernberger* (Pennsylvania).

## SENSATION AND PERCEPTION

232. Bichowsky, F. R. The mechanism of consciousness: the percept arc. *Amer. J. Psychol.*, 1926, 37, 382-390.—The direct relations between perception and other conscious content may be represented by assuming an arc, the percept arc, which stands in the same relation to the pre-sensation arc which that arc, according to the Hughlings Jackson scheme, stands to the next (unconscious) arc below it. The percept arc may be looked at not as an automatic mechanism for converting impulse into motor activity, as in the uncontrolled pre-sensation arc, but as a more or less plastic mechanism where the incoming impulse tends to move parts whose friction has been reduced by previous use, but where the impulses, if suitably related among themselves and to the previous state of the mechanism, will cause new combinations of behavior.—G. J. Rich (Institute for Juvenile Research).

233. Bose, S. K., & Kanji, N. L. Perception of form by passive touch. *Indian J. Psychol.*, 1926, 1, 93-101.—Wooden blocks in the shape of circles, triangles and rectangles of equal area and weight were applied to the forearm for two seconds. In two groups of experiments, 13 subjects were employed in all. The subject was asked to judge whether the second stimulus was the same as or different from the first. The subjects relied very largely on secondary factors, such as the visual image, dermal factors of difference in temperature, weight and size (most of which were of an illusory character), etc. Hence the perception of form is explained in terms of the interrelation of different factors rather than as undervised attributes so far as touch is concerned.—S. W. Fernberger (Pennsylvania).

234. Calzia, G. Beziehungen zwischen Umdrehungsgeschwindigkeit der Kymographiontrommel und Ausmessungen am Meyerschen Tonhöhenmessapparat. (Relationships between the rate of rotation of the kymograph drum and measurements with Meyer's pitch measuring apparatus.) *Vox*, 1926, 17-18.—The accuracy of the speech melody curve obtained with the graphical measuring apparatus of Meyer depends not upon the pitch of the voice recorded but upon the selection of an adequate (sufficiently rapid) rate of rotation of the kymograph drum.—E. A. Esper (Illinois).

235. Dallenbach, K. M. Synaesthesia: "Pressury" cold. *Amer. J. Psychol.*, 1926, 37, 571-577.—A type of synaesthesia hitherto undescribed, "pressury" cold, is reported. The observer's cold spots are of two kinds, one of which gives the usual experiences, and the other of which gives also secondary experiences localized in and about the teeth and cheeks. These latter spots occur upon both the arms and legs. The secondary experiences are described as light, transient and pressury in quality, and are always localized on the side of the body stimulated. The results of this case, in view of the fact that observer has a synaesthetic inheritance, appear as evidence of the hereditary theory of synaesthesia.—G. J. Rich (Institute for Juvenile Research).

236. Dickinson, C. A. Experience and visual perception. *Amer. J. Psychol.*, 1926, 37, 330-344.—There appear to be three levels in the progress of experience, in visual perception, from its initial moment to its termination. These levels may be designated as visual pattern, generic object and specific object. They are not considered as separate and distinct but as grading the one into the other. "The climax of visual perception appears to be the coming forward, or rising up, of certain items in the field exposed, a process which corresponds to the specific naming of the particular items. These items are named consecutively. While the process of specific naming is in progress, the items in the field not being named recede or fade out. When an item has been named it remains momentarily after the rest have disappeared and then recedes or fades out itself.



The total perception consists in a gradual but quick rise to prominence of certain items and then a gradual but quick decay."—*G. J. Rich* (Institute for Juvenile Research).

237. **Farnsworth, P. R.** The effect of repetition on ending preferences in melodies. *Amer. J. Psychol.*, 1926, 37, 116-122.—"Ending preferences may be permanently altered by training. An increasing familiarity with a ratio symbol ending leads to increasing preferences for that specific ending. The type of training—order, specific notes played, etc.—does not seem to have a large effect. The important factor in the drill appears to be the hearing of the same continuous ratio symbol as the melody ending."—*G. J. Rich* (Institute for Juvenile Research).

238. **Farnsworth, P. R.** Ending preferences in two musical situations. *Amer. J. Psychol.*, 1926, 37, 237-240.—"In the *tonic sol fa* system, the resolutions of *re, sol* and *ti* to *do*, and *la* to *sol* can be explained by the tonic effect involved. The resolutions of *re* and *fa* to *me* can be explained by a habit principle. *Me* occurs as the bass note in the first inversion of the tonic triad,—a very important scale triad. It is therefore reacted to as a bass, secondary in character to *do*, but as having tonic properties. When no key is indicated, the tonic effect is obtained from previous habits. One of the notes involved has occurred very frequently as the bass of the other, and is at length reacted to as its tonic."—*G. J. Rich* (Institute for Juvenile Research).

239. **Farnsworth, P. R.** A modification of the Lipps-Meyer law. *J. Exper. Psychol.*, 1926, 9, 253-258.—The results of this study tend to confirm the Lipps-Meyer law of auditory cadences that ratio-symbols 2, 3, 5, and 7, when employed as endings, display repose effects in the inverse order of their size. They reveal, moreover, that specific training may alter the order of preference considerably. In general the subjects prefer cadences with falling inflection.—*C. C. Pratt* (Harvard).

240. **Gabriele, J. A. C.** The Snellen symbol and visual value. *Arch. Ophth.*, 1926, 55, 447-452.—The unit of surface and not the visual angle is the true criterion in determining the value of vision. The author presents a uniform and exact method for the evaluation of vision as expressed in the Snellen formulae. This renders practicable and universally applicable a record, in decimal or percentage equivalent, of the actual value corresponding to any visual symbol.—*C. W. Darrow* (Institute for Juvenile Research).

241. **Gellhorn, E., & Fabian, G.** Über den Einfluss der farbigen Unstimmung des Auges auf Unterschiedsschwelle für Farbenintensitäten. V. (On the influence of the chromatic adaptation of the eye on the difference threshold for color intensities.) *Pflüg. Arch. f. d. ges. Physiol.*, 1926, 214, 274-294.—The difference threshold for color intensities is lowered following a 30-second stimulation of the given eye by the same color. It is raised by the complementary or heterochromatic color. If the antecedent color stimulates the other eye only, all colors result in a raising of the threshold. The significance of the results for the single eye in connection with Weber's law and the relation to the Hering-G. E. Müller color theory are discussed.—*L. T. Spencer* (Yale).

242. **Guilford, J. P.** Spatial symbols in the apprehension of time. *Amer. J. Psychol.*, 1926, 37, 420-423.—The majority of the subjects had spatial images of their past, present and future of such definiteness that they could represent them by means of a drawing, usually a rising figure. Spatial figures were also drawn to represent historical time. Many of the subjects reported a definite image for the passing of time, either as movement of some sort, rhythmic units, work being done, or energy being expended. Spatial images, which are probably often of the habitual type, carry the meaning of time and furnish a frame of reference for personal and historical time.—*G. J. Rich* (Institute for Juvenile Research).



243. **Haïre, H.** *Le spasme de l'artère centrale de la rétine et l'obstruction consécutive de l'artère temporale inférieure.* (Spasm of the central artery of the retina and the subsequent obstruction of the inferior temporal artery.) *Ann. d'ocul.*, 1926, **163**, 662-666.—Obstruction of a retinal vessel, and resulting scotoma, may appear as a consequence of an intense and prolonged retinal spasm.—*E. G. Wever* (California).

244. **Halbertsma, K. T.** *Un cas de spasme de l'artère de la rétine.* (A case of spasm of the retinal artery.) *Ann. d'ocul.*, 1926, **163**, 641-662.—Bibliog., 22 titles.—Spasm of the central retinal artery, though early appearing much like embolism of this vessel, may later show certain differentiating features: the loss of vision in spasm is usually more gradual and progressive, the pupillary reflex may be somewhat less reduced, and in case of amelioration of the disease the return of vision is progressive also. Anatomically the two disorders are quite distinct; one should attempt to avoid their confusion in spite of the difficulties of the clinical examination.—*E. G. Wever* (California).

245. **Kuroda, A.** *Perception of distance in a two-year-old child.* *Jap. J. Psychol.*, 1926, **1**, 69-80.—The subject was the writer's second girl, 1 year and 7 months old at the time of the experiment. She had begun to walk one month before, could understand a few simple words, but was yet incapable of uttering meaningful words. Hence the possibility of verbal suggestion was precluded. The child was placed before a table, 90 cm. long, 70 cm. wide, 41 cm. high, just high enough for her to move her hands around with comfort on the top, and made to get a candy placed at the various points around the edge of the top. With the exception that a candy was put at the diametrically opposite point to where the child happened to be, the distance to the candy along one direction around the table was shorter than the distance along the opposite direction. The circumference of the table was 320 cm. The results show: 1. Under this experimental condition the child chose the shortest route 10 times out of 12 trials. The smallest difference of distances thus discriminated was 40 cm. (Abstractor's note: DL calculated from Table I is  $\frac{1}{2}\%$ .) 2. In order to check up how much orientation helped in the discrimination, a desk, 68 cm. long, 34 cm. wide, 51 cm. high, was placed at one of the shorter sides of the table, thereby extending the circuit by 136 cm. If the child orients herself to a candy placed in the direction of the annexed desk, and moves in the direction, she would thereby be taking the longer route. Out of 5 trials, twice she moved toward orientation, and took thereby the longer route; twice she moved away from orientation taking thereby the longer route; once she moved first toward orientation, but faced about, and finally moved away from orientation, and took thereby the longer route. 3. Next a box, 42 cm. long, 10 cm. wide, 31 cm. high, was added to the farther end of the annexed desk, extending again thereby the circuit by 84 cm. Out of 4 trials, twice she moved away from orientation and took the shorter route; once she moved toward orientation and took thereby the shorter route; once she moved away from orientation and took thereby the longer route. These ambiguous results in 2 and 3 show that orientation is not an indispensable factor in the child's discrimination of distance. 4. When a screen was placed at the free end of the annexed desk, which served as a cul-de-sac, the child learned by trial and error to avoid the route which led to the screen compelling retracing. This result shows that the child's cognition of distance may be helped by a sense of direction of a reward as well as of an obstacle.—*J. G. Yoshioka* (California).

246. **Neal, E.** *Visual localization of the vertical.* *Amer. J. Psychol.*, 1926, **37**, 287-291.—Using a method of average error, a lighted line in a dark room was set at vertical by the observers. The errors were small in magnitude and did not increase with the time that the observer continued in the dark. It would seem that this localization must depend almost entirely upon the absolute verti-

cal and the position of the body, and not to any appreciable extent upon points of anchorage in the visual field nor upon the conservation of such a frame of reference after its perception has been abolished by the dark.—*G. J. Rich* (Institute for Juvenile Research).

247. **Nogué, J.** *Le symbolisme spatial de la qualité. II.* (The spatial symbolism of quality. II.) *Rev. Phil.*, 1926, 51, 269-298.—A discussion of the reasons, both philosophical and psychological, for describing experienced qualities (sensations) only in terms of their spatial distribution in a series, as for example the placing of orange between red and yellow or of tepid between warm and cold.—*T. M. Abel* (Cornell).

248. **Stone, S. A.** *Prior entry in the auditory-tactual complication.* *Amer. J. Psychol.*, 1926, 37, 284-287.—“In a complication of auditory and tactual stimuli the latent time of the sensation for which the observer is attentively predisposed appears to be less than the latent time of the sensation for which the observer is not predisposed. The difference in the latent times in this experiment was of the order of 50  $\sigma$ .”—*G. J. Rich* (Institute for Juvenile Research).

[See also abstracts 250, 286, 287, 327, 354, 369, 410, 416.]

#### FEELING AND EMOTION

249. **Anderson, A. C., & Bolton, F. J.** *Inhibition of the unpleasant.* *J. Abn. Soc. Psychol.*, 1925, 20, 300-302.—Report of a study on the problem of repression of the unpleasant with results showing that “there is not sufficient difference between the reactions to pleasant and unpleasant stimuli in either experiment attempted to warrant the conclusion that pleasantness has any advantage over unpleasantness in facilitating quickness of response, recall, or recognition. Both pleasant and unpleasant stimuli show an advantage over indifferent stimuli in recall and recognition. As far as the data for these experiments are concerned, then, pleasantness and unpleasantness show no decided difference, but both show an advantage over indifference.”—*E. F. Symmes* (Boston Psychopathic).

250. **Cutsforth, T. D.** *The rôle of emotion in a synaesthetic subject.* *Amer. J. Psychol.*, 1925, 36, 527-543.—A highly synaesthetic subject was studied, who has synaesthetic visual imagery in all types of perception, even visual. All of her mental processes, other than the mechanized, contain an emotional increment present in terms of color-imagery. The presence of these emotional increments seems to hark back to emotional reactions of early childhood common to visual, auditory and tactual stimulation. Color-imagery functioning as emotion now forms the common denominator, or medium of association, between visual, auditory and tactual meanings.—*G. J. Rich* (Institute for Juvenile Research).

251. **Laird, D. A., & McClumpha, T.** *Sex differences in emotional outlets.* *Science*, 1925, 62, 292.—Tests of indirect emotional outlets show that college women introvert more than college men, that is, they tend or are forced to live their emotions largely within their own mental spheres, while men live theirs more in associating with others. We have yet to demonstrate that the difference is inherent in sex. It may be a reverberation of the early environment in which the restraints and training of the sexes differ.—*G. J. Rich* (Institute for Juvenile Research).

252. **Landis, C., & Gullette, R.** *Studies of emotional reactions. III. Systolic blood pressure and inspiration-expiration ratios.* *J. Comp. Psychol.*, 1925, 5, 221-253.—Testing out the results of Burtt as to inspiration-expiration ratios and of Marston and Larson as to systolic blood-pressure on the problem of differentiating specific emotions and of predicting the nature of an emotion from

such objective data, the investigators reached negative conclusions because of the great inconstancy and unreliability of both sets of data. Blood pressure rapidly returns to normal, after an emotional upset, even though we know of enduring aspects of the experience long after the event. Blood pressure records give poor correlations with the introspective data as between the emotions, but inspiration-expiration ratios do give some promise of indicating differences between truth and falsehood.—*H. R. Crosland* (Oregon).

253. **Lund, F. H.** *The psychology of belief.* *J. Abn. Soc. Psychol.*, 1925, 20, 63-81; 174-195.—Belief has a large emotional content. On the basis of the results on the rating of a series of propositions on a belief scale by college students the correlation obtained between belief and desire was  $+.88$ . This confirms in some respects the theories of the psychoanalytic school and the dynamic psychologists in the evidence for an emotional and instinctive basis for motivation and belief. It was also found that "there is a marked tendency to idealize the rational principle and to conceive of it as the most valid and important of belief determinants, notwithstanding the fact that non-rational factors appear to outweigh it so largely in conditioning our belief-attitudes. The fact that beliefs once formed are not willingly relinquished is definitely related to, if not responsible for the fact, that the side of the question first presented to us, and the first influences brought to bear upon us, are most effective in determining our beliefs, so much so as to suggest the presence of a law of primacy in persuasion. Belief, as a certain mental content, is present throughout the scale of knowledge and opinion, just as is temperature on a scale the extremes of which are hot and cold; it is not present with the same strength, however, but with varying admixtures of doubt."—*E. F. Symmes* (Boston Psychopathic).

254. **Ruckmick, C. A.** *The psychology of pleasantness.* *Psychol. Rev.*, 1925, 32, 362-383.—The psychology of emotion is in a notoriously unsatisfactory state; imagination and theory have gone ahead of the facts. In affective psychology we may have been misled by the double standard of pleasantness and unpleasantness. The opposition of the traditional affective processes is probably logical rather than psychological and consequently it would be well to consider each process separately. Recent experimental studies are brought to the support of this thesis. The time is at hand for a new attack upon affective problems which will utilize, if possible, behavioristic responses along with introspective accounts.—*P. T. Young* (Illinois).

255. **Totten, E.** *Oxygen consumption during emotional stimulation.* *Comp. Psychol. Monog.*, 1925, 3, 1-79.—A comparison is made between the rate of oxygen consumption during a period of emotional disturbance and the rate during the period immediately preceding and that immediately following the disturbance. A modification of the Benedict portable respiration apparatus was used. An attempt was made to arouse emotions rather than simply affective states of "pleasantness" or "unpleasantness" by using the following intense stimuli: an alarm of fire and sounds of extinguishing it, harsh criticism of the experimenter by his superior, a buzzer to which the subject had been previously conditioned, a buzzer with the threat of an electric shock, an angleworm crawling on the subject's face and neck, two worms instead of one, a telephone message which might mean bad news, thinking of a person of the opposite sex, a buzzer with shock, seeing a kitten mistreated, a white rat crawling on the subject; an earthworm squirming over the subject's face and neck, and a live snake. Fourteen experiments were performed and eight subjects were used. The results of the experiment were not decisive, no indications of a change in the rate of oxygen consumption appearing in the case of the first seven stimuli mentioned above. With the remaining six stimuli, there were apparent increases (4.9%-25%) of oxygen consumption following the emotional stimulation. An increase of respiration



also occurred in these cases which apparently was due neither to increased activity of the respiratory muscles, nor to tension of the muscles of the arms and legs.—*C. J. Warden* (Columbia).

256. **Wechsler, D.** On the specificity of emotional reactions. *Amer. J. Psychol.*, 1925, **36**, 424-426.—The current assumption that an individual's emotivity is a general tendency to react in an emotional way to all affective stimuli is open to question, just as is the concept of "general intelligence." The results of experiments with the psychogalvanic reflex indicate differential emotive responses to stimuli that arouse different affective states. These results coincide with the facts of common observation.—*G. J. Rich* (Institute for Juvenile Research).

[See also abstracts 237, 239, 257, 290, 374, 467.]

#### ATTENTION, MEMORY AND THOUGHT

257. **Campbell, C. M.** *Delusion and belief*. Cambridge: Harvard, 1926. Pp. 79.—A pocket-size exposition of belief as a mechanism of adjustment, and its exaggerations and social functions. The first three sections (8 pages) are introductory, and present the concept of belief as a biological phenomenon, including its exaggeration, delusion. Section 4 deals with belief-mechanisms for adjusting to the shock of bereavement, and cites examples of more and less healthy levels; Section 5 exercises the same functions for unsatisfied love; Section 6 (2 pages), for the longing for children; Section 7, for the power-urge. Section 8 presents the extremely important case of the effect of emotion, through belief, on man's conception of the nature of his environment—pointing out, for example, that it may be necessary to make allowances for this invalidating factor even in the most obvious sense-testimony. The last section presents the social psychology and mental hygiene of belief; dogmatic principles are avoided, apparently intentionally, and the question is left more or less open; with, however, a plea for the spread of information with respect to psychological laws and the cultivation of healthier habits of thought in dealing with the surroundings in which both individual and species find themselves.—*R. R. Willoughby* (Clark).

258. **Chen, L. K., & Carr, H. A.** The ability of Chinese students to read in vertical and horizontal directions. *J. Exper. Psychol.*, 1926, **9**, 110-117.—Four groups of Chinese students were given reading and cancellation tests in Chinese characters and in English letters and Arabic numerals. "Each of the four groups read and cancelled Chinese characters with greater speed and accuracy when they were arranged in vertical columns, while better results were invariably achieved when the English letters and Arabic numerals were arranged in horizontal sequence."—*C. C. Pratt* (Harvard).

259. **Jones, H. E.** Phenomenal memorizing as a "special ability." *J. Appl. Psychol.*, 1926, **10**, 367-377.—A number of cases of great memorizing ability taken from the literature of the subject are explained as being due not to *skill* or special *capacity* in memorizing, but to *patience* in memorizing, aided, perhaps, by mnemonic devices. The author reports the case of K., a phenomenal memorizer, whose accomplishments he has investigated in detail. The salient features of this case are given as follows: (1) Gonadal inferiority: eunuchoid constitution; (2) intellectual and social inferiority; (3) extraordinary memorizing as a mechanism of (a) direct compensatory adjustment and (b) mother identification.—*B. M. Morrison* (Kansas).

260. **Jones, M. G., & English, H. B.** Notional vs. rote memory. *Amer. J. Psychol.*, 1926, **37**, 602-603.—In spite of the several factors that make for correlation, there is a distinct discrepancy between the ability to memorize the sense



of the material and to memorize the exact words. This is shown in a case where the material to be memorized was identical in both cases.—*G. J. Rich* (Institute for Juvenile Research).

261. **Mack, M., & English, H. B.** *Reproduction and education.* *Amer. J. Psychol.*, 1926, **37**, 603-605.—Experiments in which the subjects reacted to either a reproduced association or an educed correlate (similar to a non-verbal analogies test) make clear that there is an educative process, hitherto unduly neglected, dynamically different from reproduction.—*G. J. Rich* (Institute for Juvenile Research).

262. **McGeoch, J. A.** *The fidelity of report of normal and subnormal children.* *Amer. J. Psychol.*, 1925, **36**, 434-445.—Three *Aussage*-tests were given to a group of normal children and also to a group of subnormals of the same average chronological age. The range of report is greater for the normals than for the subnormals. The normal group made the smaller percentage of errors, but the two groups were about equal in the absolute number of errors. Within the limits of the material and subjects used, it may be concluded that intelligence is positively related to report ability, in the sense that a certain degree of normality of intelligence is necessary for a normal range and accuracy of report; but that, when this report-threshold is passed, there is no definite relationship between intelligence and ability to report.—*G. J. Rich* (Institute for Juvenile Research).

263. **Oberly, H. S.** *Further results in "the range for visual attention, cognition and apprehension" experiment.* *Amer. J. Psychol.*, 1926, **37**, 132-137.—Further treatment of results indicates that attention, cognition and apprehension, as defined in an earlier study, are proper systematic categories for psychological experimentation. The exclusion of the lower degrees of assurance from psychophysical computations is not only justified but desirable. It can be done more readily in studies of range of attention than in the case of a differential threshold, because of the simpler conditions. The degree of conservatism in reporting judgments varies between observers. The definition of assurance on a scale of 5 degrees of betting odds is an attempt to standardize and to control this factor.—*G. J. Rich* (Institute for Juvenile Research).

264. **Patterson, C. H.** *Problems in logic.* New York: Macmillan, 1926. Pp. xii + 325.—A book of readings compiled with the intention of teaching inductive logic inductively. The introductory chapter presents the scope, materials, and methods of logic, particularly inductive logic. The last are, in the main, those of Mill—viz., agreement, difference, agreement and difference, concomitant variations, and residues. To these are added a brief consideration of analogy and combined induction and deduction. The main body of the book is divided into two parts, of which the first consists of records of important pieces of thinking illustrative of each of the methods considered. An additional chapter illustrates the use of several methods jointly. To each of these chapters is appended a somewhat detailed commentary analytic of the material contained. Each chapter of Part 2 consists of four to six accounts of thinking in a particular field of science, each accompanied by a short list of questions for practice. The fields are biology, bacteriology, psychology, sociology, economics, physics, astronomy, and law. To the chapters of Part 1 are appended appropriate chapter references to five or six standard logic texts.—*R. R. Willoughby* (Clark).

265. **Rexroad, C. N.** *Administering electric shock for inaccuracy in continuous multiple-choice reactions.* *J. Exper. Psychol.*, 1926, **9**, 1-19.—Punishment, in the case of humans, by means of an electric shock for inaccuracies in continuous multiple-choice reactions has not a single effect, but three distinct effects. It may act as an incentive, it may be instructive in its effect, or it may have a disruptive influence. "The instructive effect is in inverse proportion to the previous comprehension of the task, and consequently is not present after a

certain amount of practice. The incentive effect shows itself in the rapid adoption of a scheme or plan for learning any code and in greater care to avoid errors throughout the performance. The disruptive effect is in inverse proportion to the thoroughness with which the habit is established, and consequently will offset the incentive effect during the learning of a code, but will be offset by the incentive effect after the code is learned."—*C. C. Pratt* (Harvard).

266. **Ruckmick, C. A.** On overlooking familiar objects. *Amer. J. Psychol.*, 1926, **37**, 631-632.—When a familiar object is overlooked because the visual image of it does not fit, one finds that the chief feature about the mental image which makes it inadequate is its size—it is too small. As a result, the observer looks through and around the object of his search and thus disregards it.—*G. J. Rich* (Institute for Juvenile Research).

267. **Shelby, M., & English, H. B.** The effect of fatigue on learning. *Amer. J. Psychol.*, 1926, **37**, 429-430.—With untrained subjects, ability to learn paired associates does not act as a test either of fatiguability or of fatigue. There is a tendency to show a sprint at the end of a long period of work, but even the preceding period fails to show definite evidence of fatigue.—*G. J. Rich* (Institute for Juvenile Research).

268. **Wilcocks, R. W.** An examination of Külpe's experiments on abstraction. *Amer. J. Psychol.*, 1925, **36**, 324-341.—As a result of an error in procedure, Külpe's tachistoscopic experiments on abstraction do not prove that the percentage of correct responses is higher where observational task and report correspond than where they do not correspond. Repetitions of the experiments, with elimination of the error, shows that Külpe's result is still true in principle. When the observation is carried out attentively but with "no special observational task set", the correctness of the reports is greater than when observational task and question are directed to different characteristics of the object exposed tachistoscopically, but less than when the task and question correspond.—*G. J. Rich* (Institute for Juvenile Research).

[See also abstracts 248, 249, 292, 317, 336, 467, 500.]

## NERVOUS SYSTEM

269. **Balado, M.** A satisfactory method for staining the nerve fibers of the iris. *Arch. Neur. & Psychiat.*, 1926, **16**, 442-446.—A technical description of a method of demonstrating the nerves of the iris which embodies (1) the procedure of Alferi for the depigmentation of the sections of the iris, (2) the technic of frozen sections and (3) the method of Spielmeyer for the staining of the myelin in frozen sections. This method is claimed to give consistent and uniform results and is applicable to the pigmented iris of mammals.—*E. Beckwith* (Boston Psychopathic).

270. **Fenn, W. O.** Measurements of the increased oxygen consumption of nerves during stimulation. *Anat. Rec.*, 1926, **34**, 116-117.—In the lateral-line nerve of the dog-fish the resting oxygen consumption is 0.00135 cc. per gram nerve per minute. During stimulation there is a 15 to 33% increase which outlasts the stimulation about fifteen minutes. The apparent respiratory quotient of the resting nerve is 0.83; that of the nerve under excessive metabolism of activity is 0.76. The resting oxygen consumption of the sciatic nerve of a frog is 0.0012 cc. per gram per minute. The increase due to stimulation is 10 to 25% of this number, depending on the frequency. The true respiratory quotient is probably higher than those measured because of the storage of carbon dioxide. The measurements were taken with Thunberg's microrespirometer.—*H. R. Lasset* (Whitman).

271. Guha, B. S. Brain capacity and intelligence. *Indian J. Psychol.*, 1926, 1, 32-34.—Correlation of brain size with the results of the Army Alpha test and examinations show no relation.—S. W. Fernberger (Pennsylvania).

272. Gutman, A. B. The effect of thyroxin upon the development of nerve tracts of the medulla oblongata of *Rana catesbeiana* larvae. *Anat. Rec.*, 1926, 34, 133.—Tadpoles in their first year, with no hind legs present, were fed small doses of thyroxin for three weeks until they were in the stages of well-developed forelimbs or further advanced. The medullas were sectioned and compared with similar sections of untreated animals. The evidence indicates that the nervous system does not keep pace with other tissues after treatment with thyroxin. This may indicate a reason for the effects of such treatment.—H. R. Laslett (Whitman).

273. Kubie, L. Intracranial pressure changes during forced drainage of the central nervous system. *Arch. Neur. & Psychiat.*, 1926, 16, 319-328.—The findings of several investigators have suggested that the drainage of the central nervous system might have a beneficial effect on certain nervous system infections. The purpose of this experiment was to find a method of doing this which would keep the intracranial pressure as low as possible. All experiments were performed on dogs and the experimental procedure is gone into with great detail. The results show that the increase in intracranial pressure which accompanied intravenous injections of isotonic or hyponic solutions was not of sufficient magnitude to harm the dogs when the cerebro-spinal fluid was allowed to drain freely. The problem of the effect of administering fluids by mouth as compared with the intravenous injection is now under investigation.—E. Beckwith (Boston Psychopathic).

274. Mills, C. K. Neurology and elementary education. *Arch. Neur. & Psychiat.*, 1926, 16, 549-554.—The evolution of the brain becomes a supreme object of interest to the educator, whose duty it is to guide the child and youth. Neurology affects elementary education successfully in so far as it influences that education in accordance with the natural development of the brain structure and function. It is the rôle of the neurologist to see that elementary education is so planned and pursued that it travels hand in hand with what should be the natural order of the evolution of the brain.—I. Rappoport (Boston Psychopathic).

275. Orton, S. T. Neuropathology II. *Arch. Neur. & Psychiat.*, 1926, 16, 451-470.—The second of a series of articles on this subject. The paper describes five methods of approach to the study of cerebral localization, including the method of anatomicoclinical correlation, the experimental, the anatomic, and the comparative methods. Using all of these methods in his observations and experiments, the writer discusses the visual, auditory, epicritic, olfactory cortices, the posterior association zones, the motor and the frontal cortices from the point of view of their structure as well as their function in human behaviour.—E. Beckwith (Boston Psychopathic).

276. Plattner, F. Der Nachweis des Vagusstoffes beim Säugetier. (The demonstration of the vagus substance in the mammal.) *Pflüg. Archiv. f. d. ges. Physiol.*, 1926, 214, 113-129.—Blood transfusion from the vagus-stimulated heart of a frog to the heart of a mammal gives no evidence of a specific vagus substance. This is probably due to its counteraction by mammalian blood. Extract from the mammalian heart produces a vagal action on the frog heart and is shown to contain a specific vagus substance. Vagus stimulation increases the cholin content of the blood in the same amount as the vagus-substance content.—L. T. Spencer (Yale).

277. Putnam, T. J. Studies on the central visual system: IV. The details of the organization of the geniculostriate system in man. *Arch. Neur. & Psy-*



*chiat.*, 1926, **16**, 683-707.—In a study of the central visual system in three dimensions and quantitative estimations of the size of its component parts, and of lesions of them, the proportionate area devoted to central vision appears to be approximately the same in optic nerve tract, corpus geniculatum, inferior longitudinal fasciculus and striate cortex. The macula appears to be represented in a wedge-shaped area, with its apex anterior, in the striate cortex. This area extends not less than 2 and not more than 3 cm. anterior to the occipital pole in the specimen studied. In the fasciculus longitudinalis inferior, the macular fibers lie chiefly in the central third, but overlap the upper and lower quadrant fibers above and below, and mingle with them at the edges of the radiation. Projection fibers proceeding from homologous points in the two retinas are farthest apart at the corpus geniculatum, and gradually approach one another as they draw near the cortex. Further evidence is given of the "bayonet" course of fibers between the radiation and the cortex.—*I. Rappoport* (Boston Psychopathic).

278. **Riese, W. Formprobleme des Gehirns. Erste vorläufige Mitteilung: Körperform und Hirnform.** (Form problems of the brain. First preliminary communication: Body form and brain form.) *J. f. Psychol. u. Neur.*, **31**, 1925.—The external form of the brain is determined by purely morphological as well as by functional factors. Thus there exists a relation between the morphology of the brain and that of the entire organism. Organisms which move with great agility and speed in the medium of water or air, and which in order to meet this biological demand, possess a body form wider anteriorly and diminishing posteriorly, have also a brain which is oval in the transverse direction. This can be seen in all the different forms of vertebrates in which the body form conditioned by this manner of life is present.—*W. Riese* (Frankfurt a/M.).

279. **Riese, W. Formprobleme des Gehirns. Zweite Mitteilung: Über die Hirnrinde der Wale. Ein Beitrag zum Furchungsproblem.** (Form problems of the brain. Second communication: On the cortex of the whale. A contribution to the fissuration problem.) *J. f. Psychol. u. Neur.*, **31**, 1925, Heft 5.—It has always been attempted to show the relation which the surface of the brain and the degree of its organization bear to the brain function. In doing so it must be recognized that, on the one hand, the degree of fissuration is dependent upon a whole series of different factors, and on the other hand that the value of the brain and its bearer can by no means be determined merely on the basis of the degree of fissuration. The author now strives to demonstrate a very positive type, that one generally can not speak merely of fissuration, since there are entirely different fissuration pictures—not only degrees of fissuration. The surface configuration of the whale cortex suggests an empty monotonous paper model, rather than the animated ornament of the human cortex. The author attempts to explain this fact from the structure of the whale cortex, which can not be compared with the typical mammalian cortex either in cell architecture or in regard to its fiber system relations. In its structural principles it is much more like the cortex of the cerebellum. The cerebellum is fissured in an empty monotonous fashion exactly similar to the whale cortex.—*W. Riese* (Frankfurt a/M.).

280. **Riquier, C. C., & Ferraro, A. The circulation of the cerebrospinal fluid from the standpoint of intraventricular and intraspinal therapy.** *J. Nerv. & Ment. Dis.*, 1926, **64**, 561-580.—The authors conclude that "from the theoretical point of view the intraventricular and intraspinal therapy is justified by the experiments of many authors who have established the possibilities of a dye reaching the nervous parenchyma. From a practical point of view intraspinal therapy allows a medicament to reach the nervous tissue directly and immediately besides the secondary indirect action of the same drug by the way of the general circulation." A complete and extensive bibliography is appended.—*C. P. Armstrong* (Boston Psychopathic).



281. **Tiegs, O. W.** The structure of the neurone junctions of the spinal cord. *Austral. J. Exp. Biol. & Med. Sci.*, 1926, 3, 69-79.—By means of the reduced silver methods of Bielchowsky and of Cajal, the author finds that the fine collaterals that enter the grey matter from the white matter of the spinal cord converge upon the nerve cells of the grey matter, and penetrate the dendrites of the nerve cells, being continuous with, and quite indistinguishable from, the neurofibrils of the nerve cell. The fine collaterals, having entered the nerve cells, pass independently of one another, as the neurofibrils, towards the middle of the nerve cell, where they anastomose. From this anastomosing system a small number of neurofibrils arise, and emerge through the axon. This anastomosing system is regarded as the seat of the integration, with the component phenomena of summation, inhibition, fatigue, delay, one-directional conduction, etc. Ramifying synapses, coming into close contiguity, but not into direct continuity with the nerve cells, do not seem to occur in the spinal cord, according to this investigator. He concludes that a true neurone continuity, a continuity of the neurofibrils, occurs at the junction of neurones in the spinal cord, and that the whole of the integration occurs within the body of the nerve cell.—*J. R. Liggett (Clark)*.

282. **Tiegs, O. W.** Further remarks on the structure of the spinal cord. *Austral. J. Exp. Biol. & Med. Sci.*, 1926, 3, 161-167.—The author believes that synapses do not occur in the spinal cord. A drawing is given of a complete transverse section through half the spinal cord, prepared by the reduced silver method of Cajal. In this preparation he finds no trace of branching synapses applied to nerve cells, or ramifying among their dendrites. On the contrary, the collateral fibrils, probably after undergoing branching, penetrate the dendrites of the nerve cell, and become continuous with its neurofibrils. The dendrites of the nerve cells, he finds, are so disposed as to enable them to collect into the nerve cell individual fibres from the bundles of collaterals that traverse the gray matter.—*J. R. Liggett (Clark)*.

283. **Tilney, F.** Neurology and education. *Arch. Neur. & Psychiat.*, 1926, 16, 539-549.—The fact may be demonstrated that we cultivate only a portion of our brains. All members of the human family today are predominantly either right-handed or left-handed. Thus, by education and training, one hemisphere of the brain is more developed than the other. All specializations show the possible range of brain development. They represent differentiation of local areas of the cerebrum. The brain is fundamentally an organ to adapt the animal to biologic environment. The means for further development is in our hands if we choose to use it. Many, if not all, of our present problems may best be solved in this way. The process of development depends on better conditioning of the brain, on greatly improved educational methods and more adequate education. As the master organ of the nervous system is the basis of all further progress, neurologists should be first to see the opportunity, to accept the responsibility and to lead the way.—*I. Rappoport (Boston Psychopathic)*.

[See also abstracts 307, 313, 358, 369, 423.]

#### MOTOR PHENOMENA AND ACTION

284. **Banissoni, F.** Contributo alla psicologia sperimentale della volonta. (Contribution to the experimental psychology of will.) *Arch. ital. psicol.*, 1926, 5, 15-18.—It is attempted to throw light on the nature of volitional activity by methods similar to those developed by Külpe. In one case the method of choice reaction to an auditory stimulus was used. The reaction time was measured and introspections were secured. In other cases the subject had to memorize verbal

material. Then the instruction was given to omit certain words or to replace them by others during the recitation. The choice reaction experiments revealed "the presence of the experienced activity of the I," but no states of muscular tension. The memory experiments confirmed the results of Ach (sensations of tension, absence of affective factors).—*H. Klüver* (Columbia).

285. **Hollingworth, L. S., & Monahan, J. E. Tapping rate of children who test above 135 I. Q. (Stanford-Binet).** *J. Educ. Psychol.*, 1926, 17, 505-518.—Fifty bright children at one of the public schools in New York City were tested with the tapping test administered according to the Smedley directions so that the results could be compared with the Smedley norms. The findings were also compared with the measurements of a group of unselected children. The bright children were pupils in a special opportunity class selected on two conditions: (1) That they scored an I. Q. above 135 (Stanford-Binet) and (2) that their parents permitted them to enter the class. Conclusions: Bright children (those who test from 135 to 190 I. Q.) are distinctly superior, as a group, to children of normal I. Q. in tapping effectively. This superiority is found in both hands. No reliable difference between the two groups was found in the index of unidexterity. "Strength and speed of hand are slightly, if at all, correlated, among gifted children." Children greatly superior in intelligence were, on the average, more than a year advanced physiologically.—*A. M. Jordan* (North Carolina).

286. **Holmes, J. L. Reaction time to photometrically equal chromatic stimuli.** *Amer. J. Psychol.*, 1926, 37, 414-417.—The differences in simple sensory reaction times to colored stimuli of equal intensity are small and unreliable. Individual differences in the perception of brightness, as well as differences due to the action-time of the retina, would seem—if they exist at all—to be obscured by errors of observation. The results seem to justify the conclusion that the time of reaction is not a function of wave-length.—*G. J. Rich* (Institute for Juvenile Research).

287. **Kuroda, G. Observations on right- and left-eyed children.** *Nippon Gakko Eisei* (Japanese School Hygiene), 11, No. 6.—Fujioka reported that 35.3% of children examined showed a monocular habit; Ozaki found 31.3% monocular children in his investigation. The writer found that the right-eyedness or left-eyedness has no significant correlation with homolateral visual acuity and hand grip, and with right- or left-handedness.—*J. G. Yoshioka* (California).

288. **Maity, H. P., & Sinha, C. P. N. Studies in muscular work by the ergographic method.** *Indian J. Psychol.*, 1926, 1, 48-52.—Simple muscular work such as the contraction of the middle finger against a load is done very differently by different individuals. Ten subjects were tested with a Mosso ergograph. The number of pulls against a 4 kg. load show a wide individual variation and the subjects vary very much in their rate of increase of fatigue. An analysis of the ergograms indicates that the type of curve remains constant for a given subject from day to day in spite of minor variations. Some conclusions for varying conditions of work are also given.—*S. W. Fernberger* (Pennsylvania).

289. **Pritchard, E. A. B. Die Stützreaction. III.** (The support reaction. III.) *Pflüg. Archiv f. d. ges. Physiol.*, 1926, 214, 148-168. (For I and II, see No. 291.)—The rôle of the various leg muscles and their activating reflexes in the act of standing is studied by graphic methods. The occurrence of extero- and proprioceptive stimulation as well as certain myotatic reflex contractions is considered.—*L. T. Spencer* (Yale).

290. **Sangameswaran, R. K. A note on the physical basis of the psychogalvanic reflex.** *Psy. Stud. Univ. Mysore*, 1926, 1, 57-60.—The problem set was to isolate the influence of one of the possible agents, viz., changes in sweat secretion, in the usually observed fall in electrical resistance of the palm during emo-

tional excitement (psycho-galvanic reflex, one manifestation). The apparatus was set up so as to observe the deflection (measuring fall in resistance) due to the addition to a jar of distilled water of the washings from the subject's palm after the performance of mental or physical work (the palm having been washed also before the work). In every case the initial deflection was followed by a recovery. Only three subjects were used; their results indicated a greater deflection for mental than for physical work, and for greater than for lesser "difficulty" (introspective evidence) in its performance. Checking experiments are promised.—*R. R. Willoughby* (Clark).

291. **Schoen, R.** *Die Stützreaction.* (The support reaction.) *Pflüg. Archiv f. d. ges. Physiol.*, 1926, **214**, (I) 21-47; (II) 48-102. (For III see No. 289.)—I. A study of the leg and shoulder reactions in cats and dogs to stroking of the foot, simulating static contact, and to bending of the limbs indicates that the reaction by which the body is supported is a reflex involving leg and shoulder muscles. The reflex may be maintained under purely proprioceptive conditions. The response is not observed in spinal or anaesthetized animals but in decerebrate subjects bending of the terminal section of the leg results in a partial relaxation. The antagonistic relation of the muscles plays only a subordinate rôle and by no means explains the total response. II. The action of the various muscles involved in the support reaction is analyzed in detail and the rôles played by exteroceptive and proprioceptive stimulation are distinguished.—*L. T. Spencer* (Yale).

292. **Sengupta, N. N., & Sinha, C. P. N.** *Mental work in isolation and in group.* *Indian J. Psychol.*, 1926, **1**, 106-110.—Cancellation of a's and e's from a newspaper clipping by five subjects. Facilitation was gained throughout the experiments by working in the presence of others. The authors do not believe that this facilitating effect is the result of emotion, but rather that it is due to an attentional factor.—*S. W. Fernberger* (Pennsylvania).

293. **Uhlenhuth, E., & Schwartzbach, S.** *Control of the thyroid function by the anterior lobe of the hypophysis.* *Anat. Rec.*, 1926, **34**, 119.—Larvae of *Amblystoma tigrinum* were injected with pilocarpine, adrenalin, and anterior lobe of hypophysis. The structure of the fresh thyroid and the acceleration of metamorphosis were used in the interpretation of results. Only anterior lobe caused acceleration of metamorphosis as well as structural signs of thyroid function. Iodine did not accelerate metamorphosis, but did affect the thyroid structure. Iodothyrene accelerated metamorphosis, but did not affect the thyroid structure as the hypophysis substance did. In the salamander hormone control of the thyroid function by the anterior lobe of the hypophysis could be demonstrated.—*H. R. Laslett* (Whitman).

294. **Wheeler, W. H. (Jr.).** *Measuring the energy cost of work.* *Indus. Psychol.*, 1926, **1**, 627-629.—A non-technical description of the calorimeter method of measuring the energy cost of work, illustrated with the case of dish-washing at tables of different height. Some indication of the sensitivity of the method may be gained from the fact that changes in the working height of the tables did produce easily measurable changes in the amount of energy consumed in doing work.—*A. T. Poffenberger* (Columbia).

[See also abstracts 217, 221, 224, 226, 252, 255, 265, 267, 272, 300, 304, 308, 330, 333, 367, 374, 385, 422, 425, 431, 451, 470.]

## PLANT AND ANIMAL BEHAVIOR

295. **Berthold, L. M.** *The relative sensitivity of the honey bee to light of different wave lengths.* *Anat. Rec.*, 1926, **34**, 125.—Two or three honey bees



were placed under a large Petri dish at one time. Two beams of light could be thrown into the dish, one variable by a rotary disc photometer. The number of times a bee bumped the glass side of the dish in seeking egress was taken as a measure of the stimulating effect of the beam of light at that point. The relative stimulation of different colored lights (filtered and standardized) were: green, 100; blue, 54; yellow, 29; violet, 23; red, 2.—*H. R. Laslett* (Whitman).

296. **Berthold, L. M.** The ability of honey bees to differentiate between lights equal in energy, but different in wave length and vice versa. *Anat. Rec.*, 1926, **34**, 135.—Two beams of light of equal energy radiation but different wave lengths were made to cross in a dark box. Honey was placed near the points at which the beams entered the box, one honey dish being covered with wire screen. After reversal of the lights but not of the dishes, the percentage of bees that went to the uncovered dish before and after the reversal furnished an index of training accomplished. Bees can be trained to go to red when opposed by green and vice versa; blue when opposed by yellow and vice versa; red opposed by violet and vice versa; a bright white light opposed by a dim white light or the reverse; or to darkness when opposed by a bright light.—*H. R. Laslett* (Whitman).

297. **Colton, H. S.** The effect of bi-pedal habit on the hind legs of the albino rat. *Anat. Rec.*, 1926, **34**, 167.—Neo-Lamarckians believe that the habits of vertebrates mold the bones of the hind legs. The forelegs of fifty white rats were removed just after birth. The animals were reared in large cages with controls of the same sexes from the same litters. The animals were killed when five to six months old. The bodies, leg bones, and skulls were measured. The bi-pedal rats had shorter skulls, femurs, tibias, and lower tibia-femur indexes in the uncorrected data. When the data were corrected for the shorter body length of the bi-pedal rats, they showed differences which were, in most cases, insignificant.—*H. R. Laslett* (Whitman).

298. **Copeland, M.** An apparent conditioned reflex in *Nereis virens*. *Anat. Rec.*, 1926, **34**, 123.—If a *Nereis* is placed in a glass tube (open at both ends) in sea water, it may show little motor activity for hours. If some stimulating material, as a bit from a piece of clam, is received, it moves forward and seizes the food. No response is made ordinarily to a red light. By following red illumination with food in two trials daily for a month the time between the red illumination and the forward movement was reduced until the movement occurred for the illumination without the presence of food. Apparent conditioning of the food getting act was made for the extinguishing of light and for the alternate illumination or the darkening of the box in which the *Nereis* was kept.—*H. R. Laslett* (Whitman).

299. **Dolley, W. L. Jr.** The relation between the stimulating efficiency of intermittent light and the duration of light and dark periods. *Anat. Rec.*, 1926, **34**, 119.—It has been shown that in the drone-fly, *Eristalis tenax*, the stimulating efficiency of intermittent light depends upon the flash frequency in comparison with continuous light. In intermittent light in which the total luminous intensity and the length of the dark period are kept constant, the stimulating efficiency varies with the length of the flash. It is greatest at a certain point and either increase or decrease of the flash length decreases the stimulating effect. If the total luminous intensity and the flash length are kept constant, the stimulating efficiency varies with the length of the dark period. This is maximal at a certain point of length of the dark period, and either increase or decrease reduces the stimulating effect. These results support the contention that in the nervous system or in the photoreceptors of insects alternate sensitive and refractory periods exist. The method furnishes a means of ascertaining the length of these periods.—*H. R. Laslett* (Whitman).



300. Dunkelberger, I. Spiral movement in mice. *J. Comp. Psychol.*, 1926, 6, 383-389.—Blindfolded mice (*Peromyscus maniculatus bairdii* Hoy and Kennicott) and mice which are not old enough to have opened their eyes, when placed in a tank 5½ ft. in diameter, exhibit a very striking tendency to swim in clock-spring or helical spirals of three to ten inches in diameter. Some turn to the right, some to the left, and some either way, suggesting an hereditary basis for right- or left-turning. The natural movement of mice is spiral in direction and shape.—H. R. Crosland (Oregon).

301. Folger, H. T. Reactions to light by *Mya arenaria* in relation to the Bunsen-Roscoe law. *Anat. Rec.*, 1926, 34, 115.—The conclusions of Hecht and of Piéron in regard to the Bunsen-Roscoe law were cited. The present author finds that, while his work does not agree quantitatively with Piéron's, it does confirm his conclusion that at a high intensity less light energy is required for the induction of a response than at a low intensity.—H. R. Laslett (Whitman).

302. Helff, O. M. Factors involved in the atrophy of the tail of *Anuran* larvae during metamorphosis. *Anat. Rec.*, 1926, 34, 129.—Neither ligation of the aortas of *R. catesbeiana* larvae near the bases of the tails, the ligation of the aortas and the nerve cords in the same region, nor the segmentation of the nerve cord produced changes analogous to atrophy. Dilute lactic and butyric acids were injected in varying amounts, subcutaneously and intramuscularly, and produced disintegration of the tail within 24 to 36 hours following. This disintegration extended posteriorly from the point of injection, the anterior portions being much less affected.—H. R. Laslett (Whitman).

303. Hunter, W. S. A reply to Professor Carr on "The reliability of the maze experiment." *J. Comp. Psychol.*, 1926, 6, 393-398.—Hunter has maintained, chiefly on statistical grounds, that since the alternate runs in a maze correlate so poorly, since reliability of performance scores is proven to be low with the lower animals in the maze, and since the correlation between scores earned in two or more mazes is low, the maze-running technique not only does not enable the studying of individual differences but fails just as lamentably in the studying of group differences. Carr is convinced that group differences can still be so approached, even if individual differences are not apparent in maze-running records. Hunter calls to his aid Kelley's statistical precepts, the principal one being that it is unwise to study individual differences unless the data are shown to be 0.90 reliable or better, and with 30 or more cases group-differences should not be approached unless the reliability is proven to be as high as 0.40. A bibliography of nine references is given.—H. R. Crosland (Oregon).

304. Johnson, G. E., & Hanawalt, V. B. The influence of thyrotoxin and of pituitrin on the hibernation of *Citellus tridecemlineatus pallidus* Allen. *Anat. Rec.*, 1926, 34, 137.—Twenty-seven ground squirrels were fed thyrotoxin; twelve were fed posterior pituitary material. Anterior pituitary and thymus were fed to other animals. No change in the tendency to hibernate under cold temperatures resulted. 87 animals were injected with pituitrin and 58 with thyrotoxin, both in large doses, but neither group showed significant changes in tendency toward hibernation under cold.—H. R. Laslett (Whitman).

305. Kepner, W. A., & Nuttycombe, J. W. The persistence of an instinct in *Microstoma caudatum*. *Anat. Rec.*, 1926, 34, 113.—*Microstoma* appropriates the nematocysts of *Hydra* upon which to feed when the rhabdocoele lacks a full complement of nematocysts. If *Microstoma* has a full complement of nematocysts at its surface, it will eat *Hydra* only after prolonged inanition. In this case the nematocysts of *Hydra* will be rejected. In this is seen a complex instinct of *Microstoma*. *Microstoma*, carried through twenty-two generations without any experience of *Hydra*, appropriated, in the twenty-third generation, the nematocysts of a presented *Hydra*.—H. R. Laslett (Whitman).

306. **King, B. G.** The influence of repeated rotations on decerebrate and on blinded squabs. *J. Comp. Psychol.*, 1926, 6, 399-421.—Using Maxwell's rotation apparatus on 21 normal too-young-to-fly squabs with head free to move, on 20 normal unflaying squabs with head fixed to prevent movement, on 16 decerebrated unflaying squabs, and on 24 blinded unflaying squabs, the author obtained kymographic records of both head movements during and just following rotation, before practice and after practice. The practice consisted of 20 trials per series, 20 series per day, for each of 7 days. Two figures of the apparatus, a figure of the wiring of the same, a sample kymographic record, 9 tables of numerical results, 6 correlation charts, and 5 references to the literature are presented. Greater rotation-nystagmus characterized the first trial than the second; the after-effect of rotation is greater after the second trial than after the first; head-free practice resulted in only a small decrease of nystagmus, but head-fixed practice resulted in a much greater decrease; decerebration apparently has no influence on habituation to rotation-nystagmus but does lessen the practice effects on the after-nystagmus; blinding decreases rotation-nystagmus while it increases after-nystagmus; blinding seems to augment the practice effects on the rotation-nystagmus but to a much less degree does it so influence post-rotation nystagmus; the inhibitory effect of visual stimuli on after-nystagmus appears to be a function of the cerebral hemispheres; and habituation to rotation is apparently not a process of learning.—*H. R. Crosland* (Oregon).

307. **Lashley, K. S., & McCarthy, D. A.** The survival of the maze habit after cerebellar injuries. *J. Comp. Psychol.*, 1926, 6, 423-433.—Practice was given seven rats in the running of a maze until ten errorless runs occurred in sequence, whereupon a rest of ten days was introduced followed by a retention-of-the-habit test, then followed more practice until ten errorless runs occurred in sequence again. Then systematic destruction of various areas of the animals' cerebellums was effected through cautery. After a period indicating complete recovery from the operation, the animals were tested for retention, and were then put through relearning trials. Since the time records, error scores, and re-trials necessary for 10 errorless runs, after the operation, did not vary greatly from those obtained in the preliminary retention and relearning tests, before the operation, in both seeing and blind rats, Lashley concludes that the cerebellum plays no necessary part in the performance of the maze-running habit. Three figures of the normal anatomy of the rat's cerebellum, fourteen figures of the destroyed cerebellar areas, protocols of the behavior of the seven rats, two tables, and four references are given.—*H. R. Crosland* (Oregon).

308. **Lullies, H.** Der Mechanismus der Umklammerungsreflexes. (The mechanism of the embracing reflex.) *Pflüg. Arch. f. d. ges. Physiol.*, 1926, 214, 416-420.—The embracing reflex of the male frog follows in rhythm the breathing rate of the female. The cutaneous excitation received acts as a subliminal stimulation which renders excitation from other sources effective in eliciting the response.—*L. T. Spencer* (Yale).

309. **Mast, S. O., & Nadler, J. E.** Reversal of ciliary action in the *Paramecium caudatum*. *J. Morph.*, 1926, 43, 105-117.—Monovalent cation salts induce reversal in the direction of the strokes of the cilia; bivalent and trivalent cation salts, with a few exceptions, do not. The duration of the reversed action varies with the kind of salt. As the salt concentration is increased, the duration of the reversed reaction increases to a maximum and then decreases to zero. The results appear to indicate that the reversal is associated with changes in electrical potential but is affected by other factors.—*H. R. Laslett* (Whitman).

310. **Rabaud, E.** L'orientation lointaine et la reconnaissance des lieux. I. (Distant orientation and the recognition of places.) *J. de Psychol.*, 1926, 23, 789-825.—Largely in summary of previous studies but partly on the basis of

original observations the following points are made: For flying insects distant orientation is the result of visual cues which are later replaced by kinaesthetic cues. Actual location of the nest remains a matter of visual cues which are data of relative arrangement rather than of the absolute position of single details. The nest itself is recognized largely by olfactory but partly by tactual cues. Collective migrations of ants are maintained largely by olfactory cues. When a trail is interrupted, the olfactory cues at a distance are still effective. If the distance be too great, visual cues become dominant. Necessity for experimental study of the problem free from anthropomorphic interpretation is stressed.—*L. T. Spencer* (Yale).

311. **Riddle, O., & Reinhart, W. H.** The Manoillov sex test applied to the blood of pigeons. *Anat. Rec.*, 1926, **34**, 110.—At the ovulation and incubation stages of the reproductive cycle the sex reaction to the test is reversed frequently, due, probably, to the temporary exhaustion of the male at the ovulation period of his mate and the prolonged inactivity attending the day nesting of the male at the later stage.—*H. R. Laslett* (Whitman).

312. **Schaeffer, A. A.** Spiral movements in amebas. *Anat. Rec.*, 1926, **34**, 115.—A number of marine and fresh-water animals have been tested with regard to the nature of their paths on curved surfaces, both convex and concave, in order to find out whether the sinusoidal path on a plane surface represents a tendency to move in a helical spiral. The results indicate that this is probably the case. The degree of the curvature of the surface, the rate of motion of the animals, and individual differences affect the shape and the direction of the turns.—*H. R. Laslett* (Whitman).

313. **Stone, C. P.** The effects of cerebral destruction on the sexual behavior of male rabbits. III. The frontal, parietal, and occipital regions. *J. Comp. Psychol.*, 1926, **6**, 435–448.—Continuing the use of Lashley's cauterizing method, as he had done in previous works (1924, 1925) Stone has sought to ascertain the effects, on copulation and on the fertility of the male rabbit (Himalaya and Flemish Giants), of the destruction of the dorsal and dorso-lateral convexity of the cerebral hemispheres. The net result obtained has been that the rabbit does not need these portions of its cerebral cortex in order to copulate in normal fashion and in normal frequency; moreover, fertility, six months after the operation, is still present, even after more disastrous destruction has been effected than that just referred to. The paper cites two drawings of the normal anatomy of the rabbit's cerebral hemispheres, four photographs of injured hemispheres, a photograph of two rabbits after operation, a microphotograph of a section of an animal's testis after the brain operation, eighteen drawings of sets of lesions experimentally instituted, and three references.—*H. R. Crosland* (Oregon).

314. **Tryon, R.** Effect of the unreliability of measurement on the difference between groups. *J. Comp. Psychol.*, 1926, **6**, 449–453.—*A propos* the subject which has been under discussion by Hunter and Carr, namely the possibility or impossibility of studying group differences from data which correlate very poorly or which show a low reliability, a subject to which Tolman has also contributed by his maze studies of lower animals, Tryon has instituted a purely statistical study, to prove (1) that when a group difference has been found empirically that difference is the *more significant* in proportion as the measuring device is *less reliable*, and to present (2) a formula for the unreliability of the instrument of measurement. Six references are given.—*H. R. Crosland* (Oregon).

315. **Twitty, V. C.** Reversal of ciliary action in embryos of *Amblystoma punctatum*. *Anat. Rec.*, 1926, **34**, 116.—In *Amblystoma punctatum* the polarity of the ciliated ectoderm cell determination comes during or slightly after closure of the neural folds. Cilia of pieces of ectoderm transplanted before this stage



rotated 180 degrees, beat in the same direction as the cilia of the adjacent ectoderm; after this stage, in the opposite direction. Further discussion of polarity was contained in the article.—*H. R. Laslett* (Whitman).

[See also abstracts 224, 270, 272, 278, 279, 293, 320, 323.]

## EVOLUTION AND HEREDITY

316. **Bliss, L., & Perkins, H. F.** A study of identical twins. *Anat. Rec.*, 1926, **34**, 182.—Five pairs of identical twins show close resemblances within the pairs in color, build, features, hair whorl, eyebrow pattern, and iris coloring. There are marked resemblances in the fingerprints of the hands although the similarities may be as right hand to right hand or as right hand to left hand within the pair. Great differences in the severity of illnesses within the pair were found.—*H. R. Laslett* (Whitman).

317. **Carmichael, L.** Heredity and environment: are they antithetical? *J. Abn. & Soc. Psychol.*, 1925, **20**, 245-260.—After presenting the various theories on the subject of heredity and environment the conclusion presented was that "the known facts of the development of the nervous system in the individual, together with a dynamic understanding of the process of heredity, seems to make clear the fact that there is, indeed, a real and inviolable interdependence between maturation and environmental learning. From the moment that growth has begun in the fertilized ovum until senescence or death, development consists in the alteration of existing structures and functions. Such modification, however, can only occur by the interaction of changing environment. Heredity and environment are not antithetical, nor can they expediently be separated; for in all maturation there is learning: in all learning there is hereditary maturation."—*E. F. Symmes* (Boston Psychopathic).

318. **Cox, E. K.** The chromosomes of the house mouse. *J. Morph.*, 1926, **43**, 45-54.—There are forty chromosomes in spermatogonia and twenty in primary spermatocytes. The sex chromosomes are of the usual X-Y type. (31 figures).—*H. R. Laslett* (Whitman).

319. **Hance, R. T.** Sex and the chromosomes in the domestic fowl. *J. Morph.*, 1926, **43**, 119-145.—The chromosome number in the domestic fowl is approximately 35 or 36. The female is heterozygous for the longest chromosome while the male is homozygous for it.—*H. R. Laslett* (Whitman).

320. **Hanson, F. B., & Heys, F.** Do albino rats having ten generations of alcoholic ancestry inherit resistance to alcohol fumes? *Anat. Rec.*, 1926, **34**, 178.—Animals treated daily with alcohol fumes require increasingly large doses or longer subjections to secure the same effects. Untreated albino rats having ten generations of alcohol-treated ancestry were tested with regard to their ability to withstand alcohol fumes in comparison with rats not having such ancestry. The time required for complete narcosis was the criterion. No increased resistance of the first group over the second was observed.—*H. R. Laslett* (Whitman).

321. **Kulenkampf, D.** Entwicklung oder Entfaltung? (Evolution or unfoldment?) *Ann. d. Phil.*, 1926, **5**, 153-170.—Concerning the concept of "evolution" three questions arise: (1) Is evolution an hypothesis or "Fiktion" (in *Vaihinger's* sense)? (2) Is it an adequate or inadequate "Fiktion"? (3) In case it is inadequate what is to be done with the concept of evolution? (1) The concept of evolution which implies a development from simple living forms to higher and more complex forms in the organic world is not an hypothesis but a "Fiktion." (2) It has been and still is, to a certain extent, a useful "Fiktion." But the inadequacy of many evolutionary schemes as well as a great number of



facts suggest a still more useful "Fiktion," that of *Entfaltung* (unfoldment). (3) The unity of the organic world created by the concept of evolution is destroyed by the concept of unfolding which is not explanatory but descriptive. It seems possible, however, to arrive at a unity in a different way. Thus biotechnique (in Francé's sense), "plasmatic will" (which does not get lost in the narcotic state) and symbiosis are examined in order to show how the new "Fiktion" links together plants, animals and humans in a more adequate way.—H. Klüver (Columbia).

322. Landauer, W. The determination of the functional structure of bones and its relation to eugenics. *Anat. Rec.*, 1926, **34**, 180.—An embryonic malformation of chickens (*chondrodystrophia foetalis*) seems to show that curvatures in the long bones which appear as a consequence of a pathological condition regularly show functional structures corresponding with the degree of bending, i.e., the bones apparently have complete ability to adapt themselves to the new change of degree and direction of stress. The definite structure of the bones originates gradually from the structure laid down during embryonic development. There is no inheritance of bone structures.—H. R. Laslett (Whitman).

323. Little, C. C. The inheritance of blaze spotting in mice. *Anat. Rec.*, 1926, **34**, 171.—Although the small white forehead spot in mice is apparently a simple form of spotting, evidence is given that its inheritance is influenced by several hereditary factors.—H. R. Laslett (Whitman).

324. Muller, H. J. Mental traits and heredity. The extent to which mental traits are independent of heredity as tested in a case of identical twins reared apart. *J. Hered.*, 1925, **16**, 433-448.—A new method is presented for determining the degree of probability that twins are genetically identical when information concerning one or more of their sibs can be obtained. In the present case the probability is 386 to 1 that they are identical. These twins, some 30 years old when studied, were separated when two weeks old and were brought up in different parts of the country and under different conditions. They showed strikingly similar results for the Army Alpha and the Otis Advanced Intelligence Test, both showing superior intelligence. An analysis of their performance with different parts of these tests, however, shows marked differences. With the Pressey X-O and the Downey Will-Temperament Tests, however, they gave markedly different scores.—S. W. Fernberger (Pennsylvania).

325. Painter, T. S. Studies in mammalian spermatogenesis. *J. Morph.*, 1926, **43**, 1-43.—The study is divided into three parts—the chromosome number and morphology of the amniotic cells of rabbit embryos; the chromosomes of racial crosses; and spermatogenesis. The sex chromosomes in the rabbit are of the usual X-Y type. The somatic number is 44. (Eight plates).—H. R. Laslett (Whitman).

326. Perkins, H. F. Hereditary aspects of Huntington's chorea. *Anat. Rec.*, 1926, **34**, 182.—An account of two families showing the presence of chorea through seven generations. The defect behaves as a hereditary recessive.—H. R. Laslett (Whitman).

327. Stark, M. B. The mechanism of inheritance and its application to hereditary eye defects. *Amer. J. Physiol. Opt.*, 1925, **6**, 469-489.—Pedigrees illustrating the inheritance of color blindness, Leber's disease, cataract (which is non-sex-linked), and glaucoma. Excellent charts are given. The author favors the view that the chromosomes are the bearers of hereditary characteristics in the inheritance of eye defects.—S. W. Fernberger (Pennsylvania).

328. Voss, G. Die Familie G. Ein Beitrag zur Kenntnis der musikalischen Vererbung. (The family G. A contribution to the knowledge of musical inheritance.) *Dtsch. Zsch. f. Nervenhekk.*, 1925, **83**, 249-263.—Valuable casuistical communication: Ancestor very musical, 1. marriage with musical, 2. marriage

with non-musical wife, 17 children, continuance through 5 generations. Exhaustive discussion of the conclusions to be drawn.—*Th. Ziehen* (Halle a/S.).

[See also abstracts 305, 372, 378.]

## SPECIAL MENTAL CONDITIONS

329. **Cohn, J.** *Begriffliches zur differentiellen Psychologie.* (Notions on the differential psychology.) *Zsch. f. angew. Psychol.*, 1926, **26**, 108-119.—Fundamental observations on the work of William Stern and Hellspach on the problem of the structure of personality.—*P. Plaut* (Berlin).

330. **Coriat, I. H.** *A type of anal-erotic resistance.* *Int. J. Psychoanal.*, 1926, **7**, 392-395.—Particularly in the psychoanalysis of stammering cases, the transitory symptom of constipation is found to be a defence against the loss of oral and anal satisfactions.—*C. Moxon* (San Francisco).

331. **Eggen, J. B.** *Rationalization and overpopulation.* *J. Abn. Psychol. & Soc. Psychol.*, 1926, **21**, 256-266.—Rationalization may apply to man's scientific beliefs. The neo-Malthusian doctrine of overpopulation is an example of rationalization, showing all the characteristics of that type of thinking as demonstrated by the psychoanalysts in the individual's mental processes. It is the "defense overdevelopment of an idea," is only speciously sound, and springs from discreditable motives which are unacceptable to its advocates. When examined, the doctrine is found to be founded on a deduction of questionable validity, and to be supported by the closed logic familiar in rationalization. When the usual scientific method, the inductive, is employed its fallacies are apparent. The sociological explanation of the so-called "checks" is more cogent and complete, and makes unnecessary the assumption of any such biological law. Neo-Malthusianism is a rationalized explanation of reprehensible economic and social conditions, and is popularly acceptable because of its justification of the *status quo*, while the more nearly correct economic and sociological explanations are invidious. Its assumption that so many human ills are due to inexorable population laws is a vindication of economic conservatism. The author cites recent similar analyses of philosophical and scientific theories. In these, as in other fields, purposefulness is more characteristic of human thought than objectivity.—*E. N. Brush* (Boston Psychopathic).

332. **Feigenbaum, D.** *A case of hysterical depression. Mechanisms of identification and castration.* *Psychoanal. Rev.*, 1926, **13**, 404-423.—A somewhat condensed account, delivered in the form of a lecture, of the analysis of a young Polish immigrant girl with typical neurotic symptoms. The sources of the conflict were the "masculine protest," to which a partial adjustment had been made by identification with her brother, and strong resentment (not altogether unconscious) toward the mother. The death of the brother (castration equivalent) brought the outbreak of the neurosis. Diagnostically, the analyst believes that the depression is not genuine, since the characteristic impoverishment of the ego is lacking. Cure was partly due to a remark of the brother before his death, which operated as a command to undergo both neurosis and recovery. The analyst appends a few comments on his own errors in technique, due apparently to slight neglects to keep his own libido freely flowing.—*R. R. Willoughby* (Clark).

333. **Garrett, H. E.** *Personality as "habit organization."* *J. Abn. Psychol. & Soc. Psychol.*, 1926, **21**, 250-255.—Watson's view of personality as "the end product of our habit systems" was taken as the point of departure for an experimental study. A chart was devised for rating individuals with regard to definite habit systems. In addition, the Army Alpha, and the George Washing-

ton Social Intelligence test were used. From the Habit System Chart a "personality" score and an "integration" score were obtained. The subjects were forty persons of both sexes, all over twenty-five years of age. The personality scores show no appreciable correlation with any other measures, but the integration scores are found to correlate well with Alpha and the Social Intelligence test. However, the validity of the integration score as a measure of personality is problematical.—*E. N. Brush* (Boston Psychopathic).

334. **Glover, E. A "technical" form of resistance.** *Int. J. Psychoanal.*, 1926, 7, 377-380.—In psychoanalytic cases of an obsessional tendency a theoretical interest in the course and the control of the analysis may hide a transference resistance and fear.—*C. Moxon* (San Francisco).

335. **Glover, J. The conception of the ego.** *Int. J. Psychoanal.*, 1926, 7, 414-419.—The ego is born of a restraint of instinctual impulses, especially in response to external stimuli. The super-ego takes over many of the inhibiting functions of the primal ego.—*C. Moxon* (San Francisco).

336. **Hankin, H. Common sense and its cultivation.** New York: Dutton, 1926, Pp. 284. \$2.50.—This book, which contains an introduction by C. S. Myers, is an attempt to deal with common sense, to define it, to analyze it, to indicate its use in modern life, and to provide suggestions as to its cultivation. Common sense is a form of mental process by which a sudden decision is reached, not by consciously reviewing the pros and cons as in formal reasoning, but by the activity of the subconscious mind. By such subconscious judgments, business men carry on negotiations in short periods of time and doctors make rapid diagnoses. "It is known that impressions forgotten to consciousness are still stored in the subconscious mind and are available to it in the processes of reasoning. Since, in adult life, we have forgotten far more than we can remember, the subconscious mind has at its disposal many more data than has consciousness. This is one reason why, in the more complicated affairs of life, a common-sense intuitive decision is often of more value than one based on conscious reasoning. That it is so rapidly arrived at may be partly due to data stored in the subconscious mind being classified and associated in a far more complicated and comprehensive way than occurs in consciousness." The forgetting of that which has been learned is a necessary preface to any such subconscious judgment, and as such should be considered in our educational system. However, upon examination of the latter, it appears that a pupil may achieve success in school to the detriment of his ability to form common-sense judgments.—*D. Spieth* (Clark).

337. **Hinsie, L. E. Psychoanalysis and heaven.** *Psychoanal. Rev.*, 1926, 13, 145-172; 323-338; 444-460.—A contribution of some volume, largely composed of three histories of analytic patients, illustrating the thesis that for the religiously colored neurosis in which the patient yearns for paradise, the heavenly state has the value of return to intrauterine life. The detailed case histories show this markedly; in addition there are numerous citations from poems showing in transparent fashion the same trend.—*R. R. Willoughby* (Clark).

338. **Jelgersma, G. Projection.** *Int. J. Psychoanal.*, 1926, 7, 353-358.—Projection is an externalization of an unconscious, and therefore an uncontrollable, process.—*C. Moxon* (San Francisco).

339. **Johnson, H. M., Swan, T. H., & Weigand, G. E. Sleep.** *Psychol. Bull.*, 1926, 23, 482-503.—A review of the recent literature.—*J. F. Dashiell* (North Carolina).

340. **Junkersdorf, P., & Liesenfeld, F. Stoffwechselversuche an zwei "Hungerkünstlern" mit langdauernder Hungerzeit.** (Researches on metabolism of two fasters during protracted hunger.) *Pflüg. Arch. f. d. ges. Physiol.*, 1926, 214, 250-273.—Individual differences in the effect of a 39-day fast by two



subjects are distinguished as to circulatory and excretory metabolism.—*L. T. Spencer* (Yale).

341. **Kelley, T. L.** Oddities in mental make-up. *School & Soc.*, 1926, 24, 529-534.—It is opined that a type trait is measurable, that it correlates zero with other measured type traits in homogeneous age or adult groups, and that its stability can be accounted for in terms of Thorndike's law of effect and Darwin's doctrine of the survival of successful variants.—*H. L. Koch* (Texas).

342. **Mahr, A. C.** Note on a typographical error in Freud's 1909 *Die Traumdeutung*. *Psychoanal. Rev.*, 1926, 13, 499-500.—Speculations upon the psychological antecedents of the setting of "Liebreiz" (charm) for "Leibreiz" (somatic stimulus). The various possibilities are canvassed.—*R. R. Willoughby* (Clark).

343. **Masson-Oursel, P.** (Séance de la Société de Psychol.) Y a-t-il des équivalents Indiens à mettre en parallèle avec les faits ou doctrines de l'Occident relatifs à l'extase et à l'intuition intellectuelle? (Session of the Société de Psychol.) (Are there Indian equivalents comparable to the facts or doctrines of the West relative to ecstasy and intellectual intuition?) *J. de Psychol.*, 1926, 23, 864-871.—The denial of value to the given, both in Brahmanism and Buddhism, lead to the attempt to escape from the ego or from action. This is in some respects similar to the phenomenon of ecstasy. But the completeness of the escape, the ideal of an absolute void, free of ideas as well as of material activity, presents a distinguishing characteristic. The Indian systems are significantly related to the economic and social conditions of India and aim at deliverance more than at the abstract truth.—*L. T. Spencer* (Yale).

344. **Müller-Braunschweig, C.** Desexualization and identification; being in love; hypnosis and sleep; notion of direction. *Psychoanal. Rev.*, 1926, 13, 385-403.—This paper, read before the 1925 International Congress of Psychoanalysts, is a "metapsychological" study of distributional ("economic") changes in the amount of libido at the disposal of the different systems embodied in the personality, in the various states mentioned in the title. It seems to have been translated from the German, and rather poorly (at least one instance of maltreatment by the compositor was also discovered) so that it makes extremely difficult reading. Section I poses the question how transformation can take place between sexual and non-sexual libido, leaving it unsolved except for a hypothesis that the two forms may have "a common embryological root." Section II is a comparison of the narcissistic- and sexual-libido distributions in loving, being loved, hypnosis, sleep, etc. Section III considers the implications of the idea of direction of libido, fixation, etc.; and the last section is concerned with various addenda to the preceding matter, among which appear the relation of narcissistic to tender emotion and to sexual libido, and the rise and fall of narcissistic available libido corresponding to changes in sexual tension.—*R. R. Willoughby* (Clark).

345. **Nunberg, H.** The sense of guilt and the need for punishment. *Int. J. Psychoanal.*, 1926, 7, 420-433.—Both arise when identification and the super-ego are formed. They are not identical—guilt implying object libido; the need for punishment, the destructive instinct.—*C. Moxon* (San Francisco).

346. **Rickman, J.** A psychological factor in the aetiology of descensus uteri, laceration of the perineum and vaginismus. *Int. J. Psychoanal.*, 1926, 7, 363-365.—Psychoanalytic evidence of unconscious satisfactions gained by these symptoms, which therefore defeated the gynaecologists' and the obstetricians' efforts.—*C. Moxon* (San Francisco).

347. **Sadger, J.** A contribution to the understanding of sado-masochism. *Int. J. Psychoanal.*, 1926, 7, 484-491.—"The ambivalency of love and hate is explained by the fact that the infant's attendants first very powerfully rouse his sexuality but they do not allow the pleasure to continue uninterruptedly."—*C. Moxon* (San Francisco).



348. **Walder, R.** Schizophrenic and creative thinking. *Int. J. Psychoanal.*, 1926, 7, 367-376.—An attempt to show how variations in experience, desire, ego-ideal and the sense of the ego boundaries determine normal, creative, obsessive and delusional thoughts.—*C. Moxon* (San Francisco).

349. **Young, P. C.** Hypnotism. *Psychol. Bull.*, 1926, 23, 504-523.—A review of the recent literature.—*J. F. Dashiell* (North Carolina).

[See also abstracts 214, 257, 259, 362, 365, 400, 411, 412, 426, 435, 477.]

## NERVOUS AND MENTAL DISORDERS

350. **Ball, C. R.** A new orientation of the psycho-neuroses. *Welfare Mag.*, 1926, 17, No. 10, 55-62.—From the clinical viewpoint two great causative factors can be seen in the psycho-neuroses; first, the emotional disturbance, or complex, which is always in varying degree under the control of the will; second, the symptoms, which are in no way under the patient's control and either may or may not be an indirect reaction as the result of the complex.—*G. J. Rich* (Institute for Juvenile Research).

351. **Bunker, H.** The significance of gain in weight in the malaria treatment of general paralysis. *Arch. Neur. & Psychiat.*, 1926, 16, 328-343.—A careful study of the weights of 62 malaria-treated general paralytics over a period varying from three months to a year and one-half. In 80 per cent. of the patients there was a gain in weight above the pre-treatment level during the first three months after the treatment. It was noted that the advance in weight was not directly correlated with the presence of mental improvement. In 50 per cent. of those who gained weight there was no improvement mentally but a gain in weight occurred in 95 per cent. of those who recovered completely or markedly. Actual loss of weight or failure to make up the loss of weight during the malaria treatment is unfavorable from the point of view of prognosis, although a gain in weight is not always indicative of a favorable prognosis especially when there has been organic damage. That the gain in weight is closely connected with the mechanism of the malaria treatment which in some obscure way brings about a change in the vital processes of the organism is suggested by the fact that (1) many patients exhibit it who show no mental improvement; (2) the maximum weight reached is not infrequently considerably more than the usual normal weight; (3) the maximum gain is often only temporary; (4) a similar phenomenon has been observed in connection with foreign protein therapy of other types.—*E. Beckwith* (Boston Psychopathic).

352. **Chung, M. F.** Thrombosis of the spinal vessels in sudden syphilitic paraplegia. *Arch. Neur. & Psychiat.*, 1926, 16, 761-771.—Thrombosis of one or more of the important spinal vessels is the mechanism of sudden syphilitic spinal paraplegia. Either the arteries or the veins alone, though usually both together, may become affected, while little or no meningitis or myelitis occurs. Foci of softening, filled with gitter cells and noninflammatory in character, follow such thromboses—those of wedge shape at the periphery from stoppage of the radial vessels, and those of ellipsoid forms at the center from occlusion of intramedullary ones. In addition to the changes in the cord, there is also a meningeal reaction below the lesion in the form of a mild inflammatory exudate, which is explained on the basis of vasomotor or trophic disturbances. The frequency of the involvement of the posterior aspect of the cord as compared with the anterior may be accounted for by the relative size of the blood vessels and their vulnerability to the attack of the syphilitic virus.—*I. Rappoport* (Boston Psychopathic).

353. **Evans, E.** A psychological study of cancer. New York: Dodd, Mead, 1926. Pp. ix + 226.—A psychoanalytical study attempting "not to present a

cure, but possibly a cause, and a contribution towards an explanation of the factor which prepares the pre-cancerous cell for action." The author is a student of Jung and the work here reported is based upon the teachings of the Zürich School of Analytical and Synthetic Psychology. The theories here presented "are the result of fifteen years of study, collecting what data I could, during my work with nervous patients whenever their associations brought a reference to cancer." (No report is made of the number of cases so observed or of whom and where these patients were.) In her early experience among nervous patients the writer found a similarity in the psychological histories of the cancer patients until they took the form of a distinct type. These patients were for the most part of the feeling-extravert type (Jung's classification). Ordinarily they were individuals who had passed the "adolescent bridge," but had run up against a stone wall—they could not face some condition of life—and had returned to a pre-adolescent stage. In other terms, they had attained individuality, but being unable to face conditions as they were, had returned to the level of the collective unconscious. Invariably these patients had formed a strong objective attachment, the object of which had become part of their lives, and something had happened to break this attachment—"in each case where a thorough investigation was possible, we have found there has been a great mental suffering, a total destruction of a hope, a tearing asunder of life from life of the patient." The cancer cell seems to be identical with the normal cells of the tissue in which it occurs. It differs only in arrangement and in its power of unlimited growth. In all life there is a creative urge—a driving force—which is unconscious, but in normal conditions is held in check by the supremacy of the conscious over the unconscious. Cancer is a miscarriage of this driving force, under the influence of the collective unconscious which is unrestrained after the patient has given up hope and interest in life (when the objective attachment is broken), that is, after the conscious has given up the struggle with the unconscious. The book contains a chapter of definitions of psychoanalytical terms as used by the Zürich School. Detailed histories of 15 patients are given in the final chapter.—*L. M. Harden* (Clark).

354. **Friedenwald, H. Sudden and transient blindness.** *Amer. J. Ophth.*, 1926, 9, 831-836.—The paper refers to (1) transient monocular blindness associated with hypertension and retinal arteriosclerosis, (2) transient recurring monocular blindness in young adults. Suddenness of onset and unilateral character of disturbance in Group 1 can only be explained by assuming an interference with retinal circulation. The conditions leading to stoppage of the circulation in the retinal arteries are known to have been followed by embolism and thrombosis. Angiospasm accounts for the disturbance in cases of frequent recurrence. Group 2 phenomena occur in young persons in the absence of vascular disease. These are perhaps to be classed in the same general group as migraine, although differing from the typical form of the disease by the absence of scintillation and by being monocular. Bibliography.—*C. W. Darrow* (Institute for Juvenile Research).

355. **Gibbs, C. E. Research problems in epilepsy.** *Amer. J. Psychiat.*, 1926, 50, 415-421.—The author discusses the work with endocrine glands carried on at the Psychiatric Institute. The method of approach here has been to make use of all the clinical factors, including the psychological reactions, in an attempt to correlate these with the biological factors behind them. He recommends this same line of attack in studying epilepsy.—*E. Beckwith* (Boston Psychopathic).

356. **Grinker, R. R. Chronic arachno-perineuritis with the syndrome of Froin. Report of a case with discussion of pseudotumor spinalis.** *J. Nerv. & Ment. Dis.*, 1926, 64, 616-628.—The author states that "since Nonne in 1904 first considered pseudotumors as a definite clinical entity, the conception has become

fixed in the literature and many cases considered to belong to this category have been reported. With more exact clinical observation and pathological study, pseudotumor cerebri has been resolved into meningo-encephalitis, meningitis, serous meningitis, and other pathological conditions which had clinically more or less resembled cerebral tumor." He then reviews the literature of pseudotumors of the cord, and the report of a case which was at first considered to belong to this group follows.—*C. P. Armstrong* (Boston Psychopathic).

357. **Grothe, E. W.** Music in medicine. *Occup. Therap. & Rehab.*, 1926, 5, 853-358.—A brief mention of the history of musical therapy and a few of the physiological effects.—*H. E. Burt* (Ohio State).

358. **Haberman, J. V.** The finer diagnoses of acute brain involvements, inclusive of syphilis and brain injury. *Monog. Med. J. & Record*. Pp. 116.—The monograph gives, in detail, the symptoms and diagnoses of brain injuries, lesions, and diseases affecting the brain. The emphasis is psychiatric rather than psychological. The article is divided into three parts, as follows: encephalitis, meningitis, syphilis, etc.; brain injury; acute disruptive vaso-cerebral conditions. The monograph contains a bibliography of about two hundred titles.—*J. R. Liggett* (Clark).

359. **Harrington, M. A.** The development of a mental hygiene program in a college or university. *J. Abn. & Soc. Psychol.*, 1926, 21, 245-249.—To improve the mental health of its students a college or university should instruct its students in the principles of mental hygiene, and provide an environment where these principles may be applied. The author finds that classroom instruction, supplemented by individual consultation, provides a satisfactory program, and that the former serves to establish contacts and pave the way for the latter.—*E. N. Brush* (Boston Psychopathic).

360. **Howland, G. W.** Occupational therapy. *Occup. Therap. & Rehab.*, 1926, 5, 407-417.—A brief mention of the historical development of occupational therapy. It is distinguished from vocational rehabilitation and sheltered employment. It is classified as general and specialized, the former involving group instruction and supervision. The author recommends it for nervous, cardiac, and tubercular cases. Some types of work frequently used are enumerated, such as basket making, bookbinding and metal work. There is a table showing hospitals near Philadelphia which use occupational therapy.—*H. E. Burt* (Ohio State).

361. **Jelliffe, S. E.** Postencephalitic respiratory disorders; review of the syndrome, case reports and discussion. Part III. Phenomenology and pathological considerations. *J. Nerv. & Ment. Dis.*, 1926, 64, 241-260.—This is a review of certain patho-physiological situations and a tentative entrance into the psychical coordinates in an effort to bring a possible monistic attitude to bear upon the comprehension of the picture of the respiratory behavior. The author then discusses the great diversity of the phenomena envisaged as respiratory, citing numerous cases; then follows a review of the general situation so as to show the complications surrounding any monistic interpretation, such as the peripheral (muscular) origin hypothesis, the thalamic hypothesis or the medullary bulbar hypothesis.—*C. P. Armstrong* (Boston Psychopathic).

362. **Jelliffe, S. E.** Postencephalitic respiratory disorders; review of the syndrome, case reports and discussion. *J. Nerv. & Ment. Dis.*, 1926, 64, 503-527.—This section of a continued paper presents several dreams of Case I and a discussion of their interpretation. The Id is used in explaining several of these dreams. The apneic phase of these respiratory disorders is considered. Case I shows a clear-cut cycle and the principle of the Super-Ego aids in understanding the cycle as a sexual manifestation. Case II gives a less clear cycle. The paper is discontinued after presenting only one dream of Case II.—*O. W. Richards* (Boston Psychopathic).



363. **Johnson, A. E.** The unhappy are always wrong. *Survey*, 1926, 57, 217-218.—Middle-aged persons who are unhappy have only one thing to do, and that is to change themselves now. For the unhappy are always wrong. Their mental hygiene may be summarized in four rules: to make immediate decisions; to meet and answer every problem as it arises; to maintain an open attitude toward new aspects of truth; and to disregard what is merely personal.—*G. J. Rich* (Institute for Juvenile Research).

364. **Karpman, B.** Psychoses in criminals: clinical studies in the psychopathology of crime. *J. Nerv. & Ment. Dis.*, 1926, 64, 482-503.—This article completes a continued paper. The true prison psychoses are first discussed. The group where the psychosis conditions the crime is contrasted with that where the psychosis results from confinement for the crime. Next the (more predominantly) schizophrenic reactions are classed into: (1) malingering reactions, (2) situational psychoses, as panic, paranoid states, catatonic reactions, etc., and (3) regression prison psychoses, including those apparently a reaction to environment but with the symptomatology of regression. The article concludes with a consideration of the affect and psychoneurotic reaction types and a complete summary of the entire article. All classes are illustrated with case histories.—*O. W. Richards* (Boston Psychopathic).

365. **Knapp, P. M.** An habitual truant who has developed an obsession for railway travel. *J. Delinq.*, 1926, 10, 368-388.—A case report with suggested interpretations in terms of emotional conditioning.—*H. L. Koch* (Texas).

366. **Kolb, ———.** International comparative statistics of general paresis. *J. Nerv. & Ment. Dis.*, 1926, 64, 225-228.—Dr. Kolb makes a plea for all data, statistics, reports on the subject of paresis in order to clear up the identity of the quantity (Y). He hopes all connected with this work will make a study of how civilization has influenced the paresis curve and caused divergences of its course from the paresis curves of other territories. For "Paresis may be reduced to 'syphilization and civilization.' General paresis and tabes only arise when to syphilis a second factor rooted in civilization is given. One etiologic quantity (X) of the fatal equation 'general paresis' has been found in the syphilitic infection." Whence the importance of determining the second quantity (Y).—*C. P. Armstrong* (Boston Psychopathic).

367. **Nielsen, J. M., & Stegman, L. V.** A case of non-syphilitic papillary inaction, associated with evidence of vegetative imbalance. *Arch. Neur. & Psychiat.*, 1926, 16, 597-604.—Arguments to rule out syphilis are given. Organizing the symptoms, they appear as follows: Vagotonia: (1) physical fatigability; (2) dry hair; (3) accommodation spasm on the right; (4) absence of gag reflex; (5) excessive hunger before meals; (6) spasm of the pylorus; (7) excessive tympanitis; (8) hyperinsulinism; (9) hyperidrosis. Sympathicotonia: (1) mydriasis; (2) rare winking; (3) dryness of the eyeballs; (4) vasoconstriction in the conjunctivae by epinephrin persists for one and one-half hours; (5) accommodation paresis on the left. There is one objection to the vegetative imbalance interpretation. Functionally altered pupils will usually react at least to some extent to light. Here the right will not react to light or in convergence. But, on the other hand, it does react to interference with the vagus or sympathetic trunk and the left does react, as we should expect in a functionally dilated pupil, by contracting slightly to light and in convergence.—*I. Rappoport* (Boston Psychopathic).

368. **Parker, H. L.** Aneurysms of cerebral vessels: Clinical manifestations and pathology. *Arch. Neur. & Psychiat.*, 1926, 16, 728-746.—In four cases at the Mayo Clinic, arteriosclerosis was the cause of aneurysmal dilatation in one, endocarditis with embolism in one, and congenital weakness of the arterial wall in two. The signs of embolic aneurysm are likely to be masked by those of the



causal disease; that is, endocarditis. Congenital weakness of the wall of a cerebral artery with the formation of aneurysm may be associated with congenital anomaly elsewhere in the vascular system. In cases in which complete and final rupture has taken place, the symptoms are those of hemorrhage at the base of the brain with signs of meningeal irritation. The spinal fluid is bloody. It is only in the cases of aneurysm with intermittent leakage and focal compression that correct diagnosis and localization of the aneurysm is possible.—*I. Rapoport* (Boston Psychopathic).

369. **Pentz, W. R., & Borman, M. C.** Dental sensation in syphilis of the central nervous system: Clinical findings in *tabes dorsalis* and in general paralysis. *Arch. Neur. & Psychiat.*, 1926, 16, 629-632.—In a study of dental sensation in syphilis of the central nervous system in a series of thirty-two cases, the authors found, with two exceptions, varying degrees of anaesthesia of the dental pulp without other loss of trigeminal sensation. They suggest that these changes may be due to a specificity of action on the dental pulp tissues by the metabolites of syphilitic infection.—*I. Rapoport* (Boston Psychopathic).

370. **Pratt, G. K.** Psychiatric departments in general hospitals. *Amer. J. Psychiat.*, 1926, 5, 403-409.—The psychiatric department of the general hospital can be of great help in the case of the acute, curable mental diseases. The psychoneurotics have always been a great problem in the general hospital; they demand much attention, are over-sensitive and baffle the physician by the various hysterical symptoms they present. Many physical diseases are interrelated with some form of mental abnormality, as in encephalitis, toxic conditions, typhoid and so on. The special equipment of a psychiatric department provides facilities for the proper therapy. Another aspect of the psychiatric department which is discussed is the out-patient clinic and its relation to the community at large. Suggestions are offered for the physical equipment and administration of a psychiatric department.—*E. Beckwith* (Boston Psychopathic).

371. **Pressey, S. L., & Pressey, L. C.** Mental abnormality and deficiency. New York: Macmillan, 1926. Pp. xii + 356.—This book is the result of several years of experience in teaching courses in abnormal psychology, the study of the feeble-minded, and the clinical study of school children. It bears evidence of work in schools, hospitals and other institutions where the problems presented to the reader were seen in their various settings. The writers direct attention to the need of appreciating certain features of the subject before beginning a study of mental diseases and deficiency. The first fact they suggest for consideration is the prevalence of mental diseases and disability; the mild, preventable forms being exceedingly common. The second important feature is that mental ill health can, in many cases, be cured; and the third is that any generalization concerning abnormal persons is likely to be false to the facts. The authors attempt to formulate material which shall give in a practical manner an acquaintance with the major problems of mental health, and of mental disease and deficiency, believing that a course dealing with these matters would seem an essential part of a liberal education. They have tried to outline the primarily medical and psychiatric features of these problems, to show their even more fundamental relations to education; and to indicate the frequency with which matters involving mental abnormality appear in business and professional life. The treatment of the subject-matter covers special fields of work, such as social service, personnel management, the care of delinquents; the function of school and college in relation to the students' emotional development, educational, vocational and recreational guidance. In detailing methods of case study the authors suggest the proper outlines to follow and the elaboration of them, reminding the student that the most important thing about a record may be that there should not be too much of it. Types from the "normal" to the feeble-minded are

analyzed; functional and organic psychoses are discussed in a fashion of easy reading, suited to the authors' intent to avoid a "too specialized, a too medical" approach. Major problems, including the most troublesome diagnostic cases met by school official, social worker or personnel manager are studied, and treatment suggested. There is a chapter on mental hygiene, stressing the importance of a wholesome program for the child, as well as the supervision and direction of adult life under certain trying modern conditions. The book presents illustrative cases; includes exercises in application of points emphasized; and contains a bibliography and a glossary.—*R. Herbert (Clark)*.

372. **Rombold, C., & Riley, H. A.** **The abortive type of Friedreichs' disease.** *Arch. Neur. & Psychiat.*, 1926, 16, 301-312.—The article presents the record of three generations of a family in which several individuals at varying times of their lives developed symptoms which are typical of Friedreichs' disease but which came to a spontaneous cessation after the development of some disturbances in gait and foot deformity. There were no significant sex-linking characteristics nor anything in the physical make-up of the family except its vulnerability to infection that have any important bearing. It was noted, however, that the degenerative tendency weakens; the most definite signs are elicited in the grandmother, the second and third generations showing an anticipation and failing to develop as marked a syndrome.—*E. Beckwith (Boston Psychopathic)*.

373. **Saito, T.** **Symptoms of nervous diseases found in girls taking entrance examination of higher girls' schools.** (Abstractor's note: higher girls' schools correspond to middle schools for boys.) *Nippon Gakko Eisei (Japanese School Hygiene)*, 10, No. 5.—Girls taking entrance examination of higher girls' schools showed more frequently than controls the following six symptoms of nervous diseases: (1) anaesthetic patches; (2) palpebral tremor; (3) facial neuralgia; (4) heightened patellar and Achilles reflexes; (5) Aschner's phenomena; (6) increase in pulse rate and tension.—*J. G. Yoshioka (California)*.

374. **Syz, H. C.** **Psychogalvanic studies in schizophrenia.** *Arch. Neur. & Psychiat.*, 1926, 16, 747-760.—Patients and normals were submitted to a psychogalvanic examination lasting for thirty to forty minutes. The curves obtained from patients presented characteristic features which are especially pronounced when the cases are compared in groups. In paranoid schizophrenics, one finds fewer reactions which are closely connected with the outside stimuli, but many waves which appear spontaneously. Both the galvanic and respiratory curves were often found to be of irregular form (these features being uncommon in normals). Catatonics gave no (or very little) response; in some cases there were spontaneous fluctuations (with no relation to stimuli). The respiration showed abrupt changes from a regular to a very irregular type. In depression there is a low total number of responses, an increase of the spontaneous waves, and a consistent regularity in the shape of both the galvanic and the respiratory curves. The psychogalvanic phenomenon, then, is of assistance in an objective, experimental discrimination and characterization of some of the outstanding psychopathologic reaction patterns.—*I. Rappoport (Boston Psychopathic)*.

375. **Tompkins, A. L.** **The organization of the occupational therapy department at the Marcy division of the Utica State Hospital.** *Occup. Therap. & Rehab.*, 1926, 5, 419-426.—The main discussion deals with organization. There is incidental mention of a dementia praecox case who paced about a great deal and crawled into inaccessible places, and showed a marked decrease of this activity after taking up caning chairs. A similar case that was inclined to bite furniture, electric fixtures, and the like, was put on jig-saw and loom work, and dropped these other tendencies.—*H. E. Burt (Ohio State)*.

376. **Vaux, C. L.** **A discussion of physical exercise and recreation.** *Occup. Therap. & Rehab.*, 1926, 5, 329-333.—Exercise helps cases of depression by pro-

viding more nervous stimulation and glandular secretion. With the hypochondriac the patient should not be told that the exercise is directed toward improving a certain bodily organ. Where the patients went through a long hall to the dining room it proved beneficial to install a piano and have them march in.—*H. E. Burtt* (Ohio State).

377. **Wenner, W. F.** The prevention and cure of tetany by the oral administration of ammonium chloride. *Anat. Rec.*, 1926, **34**, 131.—Parathyroid-ectomized dogs given a 5% solution of ammonium chloride in 100 cc. doses twice daily may be kept free from tetany for long periods, or made to recover within two hours from tetany after it has occurred. Magnesium lactate is also effective in the prevention and cure of parathyroid tetany.—*H. R. Laslett* (Whitman).

[See also abstracts 243, 273, 280, 326, 330, 346, 348, 423, 424, 437, 470.]

### SOCIAL FUNCTIONS OF THE INDIVIDUAL

378. **Arthur, G.** The relation of I. Q. to position in family. *J. Educ. Psychol.*, 1926, **17**, 541-550.—The Kuhlman-Binet test was given to a very large number of children of foreign-born parents, Finn, Russian, or South European. From these, 92 siblings whose surnames showed them to be Finn, Russian, or South European were chosen for study. The younger sibs' I. Q. was 99.14; the elder, 93.05. This difference was shown to be statistically reliable. But what causes the younger immigrant children to have the higher intelligence? Defects of the tests, priority of testing, and language equipment are examined to determine if possible the cause. None of these seem to have anything to do with it. For example, in the case of language, the younger children maintain their superiority as they grow older. The suggestion is made that it may be due to the changing habits of parents from considering black coffee and homemade wine as fit food for children to the more hygienic American standards. It would thus seem that the elder siblings of immigrant families are inferior on the average to those of American parents but that the young siblings are on the average good intellectual stuff.—*A. M. Jordan* (North Carolina).

379. **Bartlett, F. C.** The social psychology of leadership. *J. Nat. Inst. Indus. Psychol.*, 1926, **3**, 188-193.—Broadly speaking, the leaders in any complex modern social group are of three types: (1) the man who maintains his authority mainly by virtue of the social prestige attaching to his position; (2) the man who maintains his authority mainly by virtue of his personal capacity to impress and dominate his followers, and (3) the man who maintains his authority mainly by virtue of his personal capacity to express and persuade his followers. There are more leaders of the first or "institutional" type than of any other. The palmy days of the "dominant" leader are those in which groups have relatively unspecialized social functions and those in which groups come into definite antagonism. The "persuasive" leader comes to the front as society develops. Leaders who are a blend of the persuasive and the dominant types are produced by the capacity of modern society for increasing group antagonisms with little or no physical violence; they possess the linguistic fluency of the first and the relative adaptability of the second.—*A. R. Knight* (National Institute of Industrial Psychology).

380. **Bentley, A. F.** Simmel, Durkheim, and Ratzenhofer. *Amer. J. Sociol.*, 1926, **32**, 250-256.—Simmel, Durkheim, and Ratzenhofer show a common concentration of purpose upon a coherent statement of social facts without intrusion of other elements. Their philosophical or psychological foundations may be stripped away without hurt to their works.—*E. A. Esper* (Illinois).



381. **Bernard, L. L.** The interdependence of factors basic to the evolution of culture. *Amer. J. Sociol.*, 1926, **32**, 177-205.—The evolution of culture may be separated into three general stages, those of (1) the lowest animal types, (2) median animal types, and (3) the higher animals. The last stage includes the anthropoids and man. The human division embraces savage, barbarian, and civilized types of culture. Under each of these stages and periods are considered nine different factors which influence or determine culture: (1) gross organic structure, (2) neural organization, (3) language symbolisms, (4) the processes of thinking involved, (5) the phases of invention utilized, (6) the types of environment operative, (7) the types of adjustment functioning, (8) the objectives sought in adjustment, (9) the resulting types of social organization. The evolution and interdependence of these factors is displayed in a chart. Bibliography of 48 titles.—*E. A. Esper* (Illinois).

382. **de Hostos, A.** On the origin of ornament. *Amer. J. Physiol. Opt.*, 1926, **7**, 423-438.—Art developed from human perception of purely fortuitous acts and then passed through attentional, imaginative and comparative stages until the act was repeated voluntarily and in a coördinated fashion.—*S. W. Fernberger* (Pennsylvania).

383. **Dexter, E. G.** The influence of the weather on human conduct. *Scient. Mo.*, 1926, **12**, 322-330.—A comparison of Weather Bureau records with police, school, penitentiary, hospital, and similar records shows many correlations between the number of arrests for assault and battery, drunkenness, suicides, hospital cases, insanities, etc., and temperature, humidity, wind velocity, oxygen content of atmosphere. These are described in turn.—*J. F. Dashiell* (North Carolina).

384. **Diamond, H. M.** Property and the cult. *Amer. J. Sociol.*, 1926, **32**, 264-270.—Lacking the devices developed in higher civilization for purposes of social control, primitive groups make use of the cult to obtain similar ends. The protection of property rights by cult devices such as taboo is an illustration of this fact.—*E. A. Esper* (Illinois).

385. **English, H. B.** Reaction-time symptoms of deception. *Amer. J. Psychol.*, 1926, **37**, 428-429.—The distinction between good and bad liars on the basis of following or disobeying instructions as to the order of forming free associations does not appear to hold. The two criteria previously postulated, reaction-times and variability, run crisscross. It is doubtful whether the experimental setting uniformly involved the attitude of deception.—*G. J. Rich* (Institute for Juvenile Research).

386. **Fairchild, H. P.** The making of Americans. *Indus. Psychol.*, 1926, **1**, 121-131.—Discussion of Americanization, in which it is said that one of the gravest dangers lies in the fact that "the foreigner who is eager for assimilation will try to adopt the behavior of his new group before he has acquired the inner feeling that normally accompanies and justifies that behavior."—*S. W. Fernberger* (Pennsylvania).

387. **Judd, C. H.** The psychology of social institutions. *J. Abn. & Soc. Psychol.*, 1925, **20**, 151-156.—A criticism of the theory that social psychology is only a phase of individual psychology and that imitation and suggestion account entirely for the mechanism of the uniting of individuals in groups. "Reform of social psychology can be effected through the consideration of social institutions which are objective in the sense that they exist outside individuals. . . . Social creations epitomize in their present forms all the intelligence which has entered into the social evolution which brought them forth, and these social institutions constitute the appropriate subject-matter for social psychology. . . . The essence



of social existence is not to be found in the instincts of isolated individuals but in those accumulations of intellectual capital which make it impossible for the individual to live except as he becomes a part of the cooperating group which has brought this intellectual capital into being and is now devoting a vast amount of its energy to solidifying its holdings." Social psychology would be better renamed "psychology of social institutions" which would define the "content and method of explanation to be used by this most fundamental of social sciences."—*E. F. Symmes* (Boston Psychopathic).

388. **Kuwata, Y.** Report on comparative study in mentality of Formosan and Japanese children. *Jap. J. Psychol.*, 1926, 1, 46-68.—660 Japanese children (330 boys, 330 girls) and 643 Formosan children of Chinese descent (325 boys, 318 girls) in grades I-VI in elementary schools in Taihoku, Formosa Island, Japan, were given in September, 1922, the following battery of tests: 1. Immediate memory (reproduction of a 5 spot pattern). 2. Symbol-substitution. 3. Maze. 4. Cancellation (Pieron's forms). 5. Free association. 6. Color preference. 7. Preference of colors in combination. 8. Emotion (report on emotional objects). 9. Motor strength (Collin's hand dynamometer) and speed (tapping). 10. Esthesiometry. 11. Consonance of sound (this test was discarded). 12. Motor coördination (form board). The Japanese children were compared with the Formosans by the means, or medians when a time limit was set, of each test, grouped in grades and ages. The grade comparison shows that the Japanese children excelled the Formosans in all grades in free association, motor accuracy, maze, and tactile sensibility; did poorly in motor coördination; did poorly in cancellation and symbol-substitution in lower grades, but excelled the Formosans in upper grades. The two races overlapped in motor speed, hand grip, and memory. The age comparison shows that the Japanese excelled the Formosans in all ages in cancellation, symbol-substitution, motor coördination, maze, association, hand grip, and memory; did poorly in tactile sensibility in younger ages, but came up in older ages; excelled in motor accuracy and speed in younger years, but fell off in older years. The boys and girls were also compared, each separately. The sex difference wherever shown was smaller in the Japanese than in the Formosans. In regard to color preference, the Japanese children preferred purple and blue; the Formosans red. The two races agreed in citing violet as the most disliked color; green was the next disliked. The Formosan girls disliked green and yellow. In regard to emotional objects, the Japanese cited earthquake as the most horrible thing; the Formosans mentioned the tiger.—*J. G. Yoshioka* (California).

389. **Madhava, K. B.** Measurement of difference. *Indian J. Psychol.*, 1926, 1, 102-105.—Compares the results in respect to scores in entrance examinations of the Brahmin with the other applicants. These are analyzed with regard to various statistical concepts.—*S. W. Fernberger* (Pennsylvania).

390. **Narasaki, A.** Sex differences in the mentality of children. *Tetsugaku Kenkyu* (Philosophical Studies), 8, No. 3.—The sixth-grade children were tested in 10 different mental functions, namely in inference, past mental content, classification, abstraction, logical clearness, logical generalization, attention, imitative art, mechanical memory, and relational memory. 78.3%-96.5% of the scores of each respective test showed no sex difference. 83% of general mentality (total of the scores of the 10 mental functions), also showed no sex difference. 3.5%-21.7% of the subjects, however, showed some sex difference. Within this limited group boys excelled girls in inference, past mental content, classification, abstraction, logical clearness, logical generalization, and attention.

Girls did better than boys in imitative art, mechanical memory, and relational memory.—*J. G. Yoshioka* (California).

391. **Nuemann, E. W.** *Die Totenbestattung bei den Naturvölkern.* (Burial of the dead among primitive peoples.) *Mannus: Zeitschrift für Vorgeschichte*, 1926, 18, 232-237.—The religious ceremonies found among primitive peoples of the present probably did not exist in prehistoric times. There were three primitive forms of burial: (1) covering with earth, (2) putting on a scaffold, (3) embalming. Connected with all these forms were longer or shorter celebrations of a social nature. These preceded historically or were perhaps the foundation for the religious ceremonials arising later.—*E. A. Gaw* (Mills).

392. **Nieuwenhuis, A. W.** *Der primitive Mensch und seine Umwelt.* (Schlussartikel.) (Primitive man and his environment. Concluding article.) *Zsch. f. Völkerpsychol. u. Soziol.*, 1926, 2, 19-35.—The religious attitude which a man slightly developed in civilization has to his environment is described. The questions especially discussed are, how far the religious phenomena so extremely important in human social life are based upon real fact; and further, how the mind of man originally was able to develop these forms of belief of his naïve religion.—*P. Plaut* (Berlin).

393. **Paschal, F. C., & Sullivan, L. R.** *Racial influences in the mental and physical development of Mexican children.* *Comp. Psychol. Monog.*, 1925, 3, 14, 1-76.—The purpose of the investigation is to analyze the Mexican group into its racial elements and to determine how these elements compare with each other physically and mentally. The subjects were all of the nine- and twelve-year old Mexican boys and girls in the public school system of Tucson, Arizona. Two methods were used in the study—the psychological and the anthropological. In connection with the psychological investigation, the following six performance tests were used in determining intelligence: the Seguin Form Board, the Witmer Cylinder Test, the Healy Picture Completion Test, the Knox Cube Test, the Two Figure Form Board, the Five Figure Form Board. In the anthropological investigation, anthropological and anthropometric observations and measurements were those of the generally accepted International Agreements. It was found that the Mexicans are a very variable group racially and that they have been stringently selected by factors of immigration. Approximately 15% of the germ plasm of the Mexicans in Tucson is Indian in origin, exclusive of the Yaqui Indians. The Tucson Mexicans who are partially of Indian origin have a lower mental score, a lower social status, and a lower school standing than do those who are wholly of white origin. In general, the correlations between mental score and individual race characters were very small because of intermixture, skin color showing the highest correlation with mental score. In comparing mental test results of Mexican children with those of American standardizations for the same tests, a considerable overlapping is found in the top third of the distribution in most tests, the American children showing increasing superiority from the median downward.—*C. J. Warden* (Columbia).

394. **Richmond, E. R.** *The mother tongue.* *J. Delinq.*, 1926, 10, 399-402.—The paper, advocating not only an organized attack on the problem of gross speech defects but also training for mastery in the use of the mother tongue, is of the inspirational type.—*H. L. Koch* (Texas).

395. **Rogers, J. F.** *Genius and health.* *Scient. Mo.*, 1926, 23, 509-518.—Biographies of many great men named show that most of them were of excellent physique, a few of poor; but in practically all cases they were especially careful to maintain their health.—*J. F. Dashiell* (North Carolina).

396. **Seagrave, M.** Causes underlying sex delinquency in young girls. *J. Soc. Hygiene*, 1926, 12, 523-529.—The majority of statistics show that the sexually delinquent girl is not sufficiently below the average girl in mentality or physical condition to convince one that these are important factors of delinquency. Unfortunate home conditions are factors definitely contributing to delinquency.—*G. J. Rich* (Institute for Juvenile Research).

397. **Smith, M. E. W.** Racial tastes. *Indus. Psychol.*, 1926, 1, 118-120.—Tests made on 1,200 Irish, German and Italian children with cards on which pictures of objects are either symmetrically or non-symmetrically arranged. Various kinds of pictures were shown. The author finds that the Irish and Germans have "a positive drift toward the romantic as against the classical while the Italians chose about 50 per cent. of each."—*S. W. Fernberger* (Pennsylvania).

398. **Sorokin, P. A.** Impoverishment and the expansion of governmental control. *Amer. J. Sociol.*, 1926, 32, 206-216.—In a society where there exists a differentiation into rich and poor, an impoverishment or an increase of the economic contrast between the wealthy and the poor facilitates an expansion of government interference in economic relations. This relationship is illustrated, with bibliographical references, from the economic history of ancient Egypt, Greece, and Rome, and of the Middle Ages and post-war Europe.—*E. A. Esper* (Illinois).

399. **Tanaka, S.** A study of moral evaluation by boys and girls. *Jap. J. Psychol.*, 1926, 1, 81-99.—Following Snyder and Dunlap's method, 100 items of conduct (49 examples of good conduct, 51 of bad conduct) were selected to be evaluated on a scale of +10 to -10 within 50 minutes by the boys and girls in Middle Schools (Japan). 50 of these were taken from Dunlap's list; the other 50 were made up by the author and an assistant. About 7,000 children served as subjects, but the results herein reported are based upon the returns from 169 fourth-year boys in the Middle School and 190 fourth-year girls in the Girls' High School in the city of Kohfu, Yamanashi prefecture, Japan. The average age of the groups is 16 years and 7 months. The experiment was done in December, 1925. The results are as follows: I. The mean of the median scores of evaluation on 49 "do" items for boys is 5.36, m. v.  $\pm 2.33$ ; the same for girls is 5.62, m. v.  $\pm 2.84$ . The mean of the median scores of evaluation on "don't" items for boys is 5.96, m. v.  $\pm 1.96$ ; the same for girls is 6.99, m. v.  $\pm 2.13$ . The girls gave higher values on both "do" and "don't" items than the boys, and their mean deviations in both items are greater than those of boys. II. The rank correlation corrected to  $r$  of the medians of "do" items for boys with those for girls is .871, P. E.  $\pm .023$ . The rank correlation corrected to  $r$  of the medians of "don't" items for boys with those for girls is .936, P. E.  $\pm .012$ . The boys and girls agreed more in evaluating "don't" items. III. The greatest agreement was found in evaluation by boys and girls on conduct in regard to state and foreigners; a fair agreement in evaluation on conduct in regard to society and family, but there was the greatest disagreement between boys and girls in evaluating personal conduct.—*J. G. Yoshioka* (California).

400. **Williams, F. E.** What are parents for? *Survey*, 1926, 57, 307-309; 335.—The home does not offer a sufficient, suitable outlet for the average person who enters upon homemaking. It can only successfully offer an outlet for a narrow range of adult emotions. But young people bring to their married life a large number of needs, adolescent, childish, infantile, with the emotional habits and reactions cultivated in meeting these needs carried over from these earlier periods. Two emotionally hungry adults, frustrated and facing emotional defeat, seek to obtain from their children what they have been unable to obtain from their mutual association, at the costly sacrifice of the emotional life and

the healthy emotional development of the children. It is not possible, on a large scale, to cure parents of their emotional and neurotic illnesses and make possible for them a belated adulthood. The more practical alternative is to encourage them to seek outside the home in vocations, avocations, hobbies and social contacts outlets for their emotional needs which cannot be found within the home except through damage to some individual.—*G. J. Rich* (Institute for Juvenile Research).

[See also abstracts 231, 253, 257, 331, 343, 363, 364, 370, 405, 427, 432, 439, 449, 452, 458, 460, 473.]

### INDUSTRIAL AND PERSONNEL PROBLEMS

401. [Anon.] Selection tests on the German railways. *J. Nat. Inst. Indus. Psychol.*, 1926, 3, 201-204.—The mental and physical qualities most necessary for a railwayman cannot be revealed by the orthodox written examination. The *Deutsche Reichsbahn* now has three laboratories for industrial psychology. Special examination systems have been devised for nearly every department of railway work: these aim at testing (I) physical condition, (II) intelligence and special aptitudes, and (III) "will-power," which includes such qualities as industry and conscientiousness. On the railways in Saxony a man can be admitted for a three years' course of training for an engine-driver only if he has passed an examination in general knowledge, a series of psychological tests, and a medical examination. A similar system will shortly come into operation throughout all Germany.—*A. R. Knight* (National Institute of Industrial Psychology).

402. Brandenburg, G. C. Do physical traits portray character? *Indus. Psychol.*, 1926, 1, 580-588.—One hundred students of Purdue University were measured in the traits most commonly evaluated by character analysts, such as shape and contour of face, color of eyes, hair and skin, etc. They were also rated by instructors, students and friends. The relationship among the various measures was calculated. The data furnish no "evidence favorable to the physiognomic system; and our only conclusion, therefore, must be that as a method of character analysis it is wholly devoid of any scientific basis."—*A. T. Poffenberger* (Columbia).

403. Brandenburg, G. C. Why some think they can read character. *Indus. Psychol.*, 1926, 1, 641-646.—An attempt to explain belief in physiognomy and other similar character reading methods as the result of a deep-seated tendency to reason by analogy, to make too much of the very slight positive correlation between physical traits and mental traits, to misinterpret, either intentionally or unintentionally, the results of scientific studies, and to let belief be governed by desire.—*A. T. Poffenberger* (Columbia).

404. Burt, H. E. Principles of employment psychology. *Indus. Psychol.*, 1926, 1, 635-640.—A general description of employment psychology, with a statement of the nature of the services that it can render and the limitations of its application.—*A. T. Poffenberger* (Columbia).

405. DeNoyelles, D. The negro as laborer. *Indus. Psychol.*, 1926, 1, 91-93.—Observations of white and negro unskilled labor in a brick yard. The white proves to be, on the whole, the better laborer except in jobs for which no definite time or amount of work has been set.—*S. W. Fernberger* (Pennsylvania).



406. **Fox, R. M.** *Psychology of the workshop.* *J. Nat. Inst. Indus. Psychol.*, 1926, 3, 205-212.—Ugly surroundings and monotonous work are at the root of modern industrial troubles: their remedy lies with the industrial psychologist rather than with the efficiency engineer.—*A. R. Knight* (National Institute of Industrial Psychology).

407. **Fryer, D.** *Industrial dissatisfaction.* *Indus. Psychol.*, 1926, 1, 25-29.—Specimen of a short questionnaire for determining industrial dissatisfaction with the job in which the worker finds himself. Specimens of desires and "thwarted desires and interest" are given.—*S. W. Fernberger* (Pennsylvania).

408. **Hawkins, L. S.** *Training tile-setting apprentices.* *J. Educ. Res.*, 1926, 14, 133-141.—Analysis of the tile-setting trade led to the formulation of a course of systematic study for apprentices. This seems better than the older hit-and-miss apprenticing to a journeyman, but the new apprentices have not been out long enough for positive statements to be made.—*S. W. Fernberger* (Pennsylvania).

409. **Hepner, H. W.** *Better judgments of men.* *Indus. Psychol.*, 1926, 1, 19-24.—Specimens of graphic rating scales with the results from the ratings of 26 cases.—*S. W. Fernberger* (Pennsylvania).

410. **Judd, H. D.** *Survey of ocular vision as related to automobile accidents.* *Amer. J. Physiol. Opt.*, 1926, 7, 207-217.—Case studies of relation of accidents to vision from Detroit.—*S. W. Fernberger* (Pennsylvania).

411. **Laird, D. A.** *How personalities are found in industry.* *Indus. Psychol.*, 1926, 1, 654-662.—This article reproduces a revision of Laird's Personal Inventory Scale for the discovery of the extrovert and the introvert, together with a description of methods of scoring and interpreting the records, and data on reliability. The article is chiefly concerned with the extrovert and the introvert in industry and the activities for which each type is best adapted. Further studies that are being made are enumerated.—*A. T. Poffenberger* (Columbia).

412. **Laird, D. A., & Wheeler, W. H. (Jr.).** *What it costs to lose sleep.* *Indus. Psychol.*, 1926, 1, 694-696.—A comparison of the effects of the loss of two hours sleep upon three subjects who were solving problems in "mental multiplication." When measured in terms of output and quality of work, there was no change from loss of sleep, but when measured in terms of energy cost, by means of the respiration calorimeter, there was an increase in cost amounting to about 300 per cent.—*A. T. Poffenberger* (Columbia).

413. **Lindsay, E. E.** *Personnel administration in the university.* *School & Soc.*, 1926, 24, 378-382.—A personnel blank is suggested which will enable university administrators to keep in close touch with the activities of the teaching staff. The relatively poor monetary reward of good teaching is lamented.—*H. L. Koch* (Texas).

414. **Miles, G. H.** *Organization.* *J. Nat. Inst. Indus. Psychol.*, 1926, 3, 181-187.—Psychological factors greatly affect the efficiency of an organization. The leader must have both intelligence and the power to inspire loyalty; the led must have some common purpose. Routine is essential for the lower grades, and, wisely administered, fosters adaptability. Careful selection and training are necessary in order to insure that the abilities of each individual are suited to the requirements of his task.—*A. R. Knight* (National Institute of Industrial Psychology).

415. **Miller, E. M.** *The psychologist in service.* *Australasian J. Psychol. & Philos.*, 1926, 4, 91-104.—Outline of service work which is being done by psychologists, especially in the United States.—*S. W. Fernberger* (Pennsylvania).

416. Paul, M. R. Industrial painting helps efficiency. *Indus. Psychol.*, 1926, 1, 681-687.—An interesting application of the facts of visual illusions of perception in the realm of industrial work, together with a brief description of the influence of the quality and tint of paints upon the illumination of industrial plant interiors.—A. T. Poffenberger (Columbia).

417. Spear, M. R. The school trained aide in the hospital. *Occup. Therap. & Rehab.*, 1926, 5, 359-361.—Advocates training aides in the hospital rather than outside. Special devices may be used to stimulate interest at critical points in the training.—H. E. Burtt (Ohio State).

418. Spielman, W. On devising analytic tests for vocational selection. (II). *J. Nat. Inst. Indus. Psychol.*, 1926, 3, 213-217.—Before selection tests are regularly used they must prove their worth. They are therefore applied to a number of individuals of varying degrees of capacity, in order to show whether success or failure at the tests varies concomitantly with success or failure at the work for which they are designed. Before making this important "test of the tests," it is well to give them a rough trial with a few subjects. This trial shows whether the tests are of the right level of difficulty; it also serves to insure that the instructions are clear and unambiguous. The actual "test of the tests" is usually first given to present workers and then the result is corroborated by testing applicants. An objective criterion of efficiency with which to compare the tests should be used wherever possible. The most useful subjective criteria are the opinions of the foremen and managers; but precaution must be taken to avoid irrelevant qualities being considered essential. The various tests in any series are not all of equal value; it is therefore essential to "weight" the tests. Test results should not be taken as the sole criteria when engaging applicants; they need to be supplemented by knowledge gained in a personal interview. If a rating scale is used the results of the interview can also be expressed in numerical terms.—A. R. Knight (National Institute of Industrial Psychology).

419. Stephenson, A. Accidents in industry. *J. Nat. Inst. Indus. Psychol.*, 1926, 3, 194-200.—Mechanical safeguards and propaganda work have reduced accidents, but the problem is now chiefly a psychological one. Much may be done by education, more by scientific selection. There is evidence that poor manual ability is an important factor in accident-causation.—A. R. Knight (National Institute of Industrial Psychology).

420. Strong, E. K. Jr., & Loveless, J. E. "Want" and "solution" advertisements. *J. Appl. Psychol.*, 1926, 10, 346-366.—This article presents certain experimental results which bear on the thesis set forth in "Psychology of Selling and Advertising" (1925) by E. K. Strong, Jr., that "there are two major objectives in advertising: first, to make a reader want, and second, to present a solution, i.e., to show how his desire may be adequately satisfied by means of the advertiser's commodity. The writers maintain further that unless the individual feels a want it is almost useless to discuss a solution. Consequently, making a man want (if he does not already want) is the more fundamental of the two aims and, for the sake of advertising efficiency, should come first." The investigation reported here "aims to measure the relative merit of stressing the 'want' or the 'solution' element in advertising, the effectiveness of each type being determined by the extent to which it makes memorable a trade-name." The material used consisted of forty advertisements (nearly all direct adaptations from advertisements in actual use) of twenty commodities, of which one for each commodity emphasizes the "want" element and one the "solution" element. Ten samples are given in this article, five of each type. It is characteristic of the entire forty advertisements that the "want" advertisements contained

fewer repetitions of the trade-name and devoted less space to describing the trade-name than did the "solution" advertisements. The forty advertisements were split into two groups in such a manner that each set had the full twenty commodities represented, each including ten "want" and ten "solution" advertisements. The subjects, likewise, were divided into two groups, and were instructed to read any and to skip any advertisements that they wished. Three tests were used to measure their memory of the trade-names: a recall test, a controlled association test, and a recognition test. A summary of the results of all the tests in the several experiments gives a ratio of 111 to 100 in favor of the "want" advertisements. An additional experiment indicates that advertisements are noted and remembered to the extent that they appeal to existing interests.—*B. M. Morrison* (Kansas).

421. **Weber, C. O., & Leslie, M.** Clerical test agrees with employer's ratings. *Indus. Psychol.*, 1926, 1, 708-711.—A report of the application of the Thurstone Test for Clerical Work to two groups of workers, 28 and 68 in number. Combined accuracy and speed scores showed a correlation of +.69 with estimates of employers in the case of the larger group and of +.61 in the case of the smaller group.—*A. T. Poffenberger* (Columbia).

[See also abstracts 473, 483, 489.]

#### CHILDHOOD AND ADOLESCENCE

422. **Aoki, S.** Significance of first walking in child's development. *Shinri Kenkyu* (Psychological Studies), 21, No. 1.—The physical and mental development of 53 children at the school age were correlated with the first walking of the children. The results showed that height, weight, and other external phases of development do not correlate with the first walking. Frequent absence from school due to sickness and other abnormalities due to poor health or weak constitution show a significant correlation with the first walking. The correlation between scholarship and the first walking was found to be 0.53. The correlation between the first walking and mental tests including tapping, memory, and cancellation was 0.19. Early walking seems to predict early mental development.—*J. G. Yoshioka* (California).

423. **Berkeley-Hill, O.** The psychopathic child—a plea for an application of the mnemonic theory. *Indian J. Psychol.*, 1926, 1, 89-92.—Many children are nervous because "of a want of due proportion between their innate tendencies." This becomes evident in the integrations of the simpler mental patterns into the more complex, especially with regard to the accompanying emotion. Following Bianchi, the author discusses the frontal lobes as the centers of control of the emotional reactions and the instinctive dispositions. The nervous child frequently "grows out" of his nervousness and this indicates a lack of integration of the frontal neurones rather than a deficiency of them.—*S. W. Fernberger* (Pennsylvania).

424. **Department of Education, Japanese Government.** Investigation on pathological traits in school children. *Nippon Gakko Eisei* (Japanese School Hygiene), 3, No. 12.—Twenty schools were chosen at random from elementary schools, middle schools, and higher girls' schools throughout the country, and the teachers were asked to classify the Grade I children into seven categories of traits, namely (1) intelligent, (2) reliable, (3) normal, (4) incorrigible, (5) melancholic, (6) superficial, (7) dull. The traits (1) to (3) were considered

normal; the traits (4) to (7), pathological. 411 elementary school children, 940 middle school boys, and 884 higher girls' school girls were thus classified. The results showed that in elementary schools 62.23% had normal traits; 37.77% showed pathological traits. In middle schools 74.64% were normal; 24.36% pathological. In higher girls' schools 88.14% were normal; 11.86% pathological.—*J. G. Yoshioka* (California).

425. **Guillaume, P.** (*Séance de la Société de Psychol.*) *Les premiers stades de l'imitation chez l'enfant.* (Session of the Société de Psychol.) (The first stages of imitation in the child.) *J. de Psychol.*, 1926, 23, 872-876.—Early imitation is motivated, not by the movement of the model, but by a desire to produce the same effects, e.g., to look at an object. The movements used to obtain the effect may differ from those of the model. The movement when there is no real object for reaction is motivated by an imagined object. Pure imitation comes quite late and only after passing through these preliminary stages.—*L. T. Spencer* (Yale).

426. **Healy, W.** *As the twig is bent.* *New Repub.*, 1926, 47, 191-193.—Play of the imagination is a widespread mental experience, but one too often repressed by social tabu and punishment. It become secret. The author sees in the laissez-faire policy towards the mental life and fantasy of children the danger of growth of conflicts and undesirable twists of personality.—*A. L. Allport* (Dartmouth).

427. **Hoyland, J. S.** *An enquiry into the comparative psychology of Indian and western childhood.* *Indian J. Psychol.*, 1926, 1, 45-47.—Comparison of the results for Indian children with those of Earl Barnes for western children indicate, as the results of a study of 1,164 examinations, that the Indian child is markedly more susceptible to religious and ethical ideals and less to materialistic considerations. But the ethical ideals of the Indian children are more abstract and lack definiteness. They also have much less idea of the meaning of public spirit; they are less interested in animals; have a less developed critical faculty, and much more home discipline (especially in girls).—*S. W. Fernberger* (Pennsylvania).

428. **Johnson, N.** *Nathalia from Brooklyn.* *Amer. Mercury*, 1926, 9, 52-59.—An incisive, humorous account of the investigation conducted by newspaper reporters of the validity of the genius of Nathalia Crane, age twelve, author of "The Janitor's Boy and Other Poems," and "Lava Lane." Section III presents biographical data of the child.—*A. L. Allport* (Dartmouth).

429. **Lehman, H. C.** *A comparison of the play activities of town and country children.* *Ped. Sem.*, 1926, 33, 455-476.—Pupils in city schools and in small one-teacher rural schools were asked to check from a comprehensive list of 200 activities those in which they had engaged during the preceding week. More town children reported movies and bicycles; and more country children reported hunting, horseback, climbing of trees and porches, blackman, anty-over, teeter-totter, singing, and whistling. The greater variety of play among the latter was explained as due to the smaller groups of children that play together and the less inhibition by ridicule, and also to the freedom from the restrictions of a city environment.—*J. F. Dashiell* (North Carolina).

430. **Lehman, H. C.** *Community differences in play behavior.* *Ped. Sem.*, 1926, 33, 477-490.—By the method of having children check from a list their play activities, data were obtained that made possible comparisons between the play of children in different communities. Those in Lawrence, Kansas, (a university town) played more basketball, football, and marbles, than those in the



other towns. Negro children played more jacks and marbles than did whites.—*J. F. Dashiell* (North Carolina).

431. **Leonow, W. A.** *Über die Bildung von bedingten Spurenreflexen bei Kindern.* (On the formation of conditioned scent reactions in children.) *Pflüg. Arch. f. d. ges. Physiol.*, 1926, **214**, 305-319.—The reaction of opening the mouth at a tempting odor was successfully conditioned to an auditory stimulus. The greater ease of such conditioning in children compared to conditioning in animals is pointed out in several respects. After one scent reflex is conditioned, other conditionings of the reaction are more promptly made.—*L. T. Spencer* (Yale).

432. **Meltzer, H.** *Talkativeness about, in relation to knowledge of, social concepts in children.* *Ped. Sem.*, 1926, **33**, 497-507.—Children were asked in personal interviews to tell the meaning of a list of social concepts ("democracy," "socialist," etc.). The answers were graded roughly as to adequacy; and the number of words used in each case was used as an index of talkativeness. Both knowledge and talkativeness increased with higher grades, but correlated with each other only .31.—*J. F. Dashiell* (North Carolina).

433. **Nakashima, K.** *On Japanese breast-fed infants.* *Jika Zatshi* (Journal of Pediatrics), No. 273.—The quantity of milk which Japanese breast-fed infants take in daily has been tabulated for a long period of time. The mean value shows that Japanese babies less than one month old take in a great deal less milk than white babies of corresponding age. After one month, however, they take in just as much as the whites.—*J. G. Yoshioka* (California).

434. **Nice, M. M.** *On the size of vocabularies.* *Amer. Speech*, 1926, **2**, 1-7.—American children of three may be expected to have an average vocabulary of 910 words. Nineteen tested showed all the way from 48 at the low peak to 1,807 at the maximum. Figures for French children, at this age, are not supplied. But a German boy is said to have a vocabulary of 1,142 words, thus rising superior to his American cousin. Eleven American boys and girls of four years tested showed a mastery of language ranging from a low figure of 811 to a high of 2,777. They averaged 1,516. French children of the same age showed an average of 1,394, and a single German boy 1,604. At five years there is a noticeable spurt in the childish grasp of language. Seven Americans ranged from 1,528 words to 5,948, an average for the group of 2,204, leading somewhat both the French child and the German, who had respectively 1,954 and 1910. Children of six years showed progress, but not so rapid as in earlier years. American boys and girls knew from 2,688 to 3,132 words. They averaged 2,963, which is slightly higher than that showed by the German boy—2,497. There are no figures for the French boy of this age.—*K. Rede* (Baltimore).

435. **Paynter, R. H.** *Humanizing psychology in the study of behavior problems in children.* *School & Soc.*, 1926, **24**, 567-571.—The author offers the opinion that the problems of temperament, personality, and motivation have come into their own as a result of genetic, objective, and behavior psychology, the discoveries in the field of mental tests and measurements, and the activities of the psychiatric social worker.—*H. L. Koch* (Texas).

436. **Pierce, F.** *Understanding our children.* New York: Dutton, 1926. Pp. x + 198.—This book is devoted to a description of child nature, from the psychiatrists' point of view, and to general suggestions for training children. Pierce points out the need of knowing first what physical, mental, and spiritual characteristics may be considered to constitute a successful child, before deciding what course of training to adopt. After mentioning some of the characteristics—health, fearlessness, resourcefulness, independence, ability to think clearly

—that are probably desirable in an individual, the author proceeds to discuss the nature of a child, in relation to its immediate and remote heredity, and to show that "instinct" and emotion must be made the basis of training, since the child does not inherit moral sense, conscience, or reasoning power. In discussing the problems of child-training, Pierce divides childhood into three periods—early childhood, preadolescence, and adolescence—mentioning such problems as emotional management, discipline, preparation for school, choice of life work, and mating, and giving helpful suggestions how to meet these problems; all of these problems and the suggestions for their solution are discussed according to the periods of childhood. In a final chapter the author summarizes the material set forth in the book, and describes some methods for constructive management of the mental apparatus, with special attention to the development of the child's imagination, and the use of suggestion and auto-suggestion.—*A. Peterson* (Clark).

437. **Rademacker, G. C.** **A behavior clinic.** *Welfare Mag.*, 1926, 17, No. 10, 38-48.—A clinic has been established in Cleveland to study behavior problems which are met with in certain day nurseries, nursery schools and kindergartens. The collection of scientific data from these cases should in time contribute to a greater understanding of the period of early childhood and add to our knowledge of both adolescent and adult behavior.—*G. J. Rich* (Institute for Juvenile Research).

438. **Wellman, B.** **The school child's choice of companions.** *J. Educ. Res.*, 1926, 14, 126-132.—Study of 113 boys and girls in the junior high school grades of the Lincoln school, New York City. Number of times the children were seen together during a period of five months forms the basis of the study. Girls paired off were more alike in scholarship than any other characteristic and they were less alike in height. Boys were more alike in height, intelligence quotient and chronological age and less alike in extroversion, scholarship and mental age.—*S. W. Fernberger* (Pennsylvania).

439. **Worthington, M. R.** **Performance test scores of behavior and non-behavior children.** *Welfare Mag.*, 1926, 17, No. 10, 97-103.—The performance on various tests of "special" abilities of a group of children showing behavior problems great enough to cause reference to a behavior clinic was compared with that of a group showing no behavior problems. Four tests were found to indicate a valid difference, namely, the Seashore pitch-discrimination test; the Bengt clerical test (speed score), the Stenquist assembly test, and the Kraepelin attention test.—*G. J. Rich* (Institute for Juvenile Research).

[See also abstracts 214, 245, 262, 285, 287, 378, 396, 399, 451, 469, 477, 487, 493, 494.]

## EDUCATIONAL PSYCHOLOGY

440. **Alderman, G. H.** **Improving comprehension ability in silent reading.** *J. Educ. Res.*, 1926, 13, 11-21.—"Comprehension ability as measured by the Thorndike-McCall Scale may be improved to a degree equivalent to two semesters by careful systematic drill work covering a period of one semester, provided thirty minutes each day is devoted to the work. Children who scored low in comprehension ability profited more by this type of drill work than did children in the upper quartile."—*S. W. Fernberger* (Pennsylvania).

441. Anibel, F. G. Comparative effectiveness of the lecture-demonstration and the individual laboratory method. *J. Educ. Res.*, 1926, 13, 355-365.—Statistical data obtained from the Department of Chemistry in the Kansas City Central High School. Two groups were balanced by mental tests. The author concludes that, for immediate retention, the lecture-demonstration method is perhaps better than the individual laboratory method. For delayed retention the results are so little different that one method may be considered as good as the other. The brighter pupils are likely to profit more than the duller by the lecture-demonstration method. The lecture-demonstration method requires about  $\frac{2}{3}$  of the time of the individual laboratory and costs much less.—S. W. Fernberger (Pennsylvania).

442. Armentrout, W. D. College students' preferences for certain mechanics of the class period. *School & Soc.*, 1926, 24, 739-740.—The students of the Colorado State Teachers' College reported in a questionnaire their preferences concerning phases of their own instruction, such as number of class periods and examinations; types of reading assignments, projects, reports, and conferences; and relative amounts of lecture and discussion in a class period, as well as various other types of general class response.—H. L. Koch (Texas).

443. Ashbaugh, E. J. Senior high school English as revealed by a standard test. *J. Educ. Res.*, 1926, 13, 249-258.—Application of Tressler's English Minimum Essentials Test to senior high school pupils reveals the inadequacy of the present teaching.—S. W. Fernberger (Pennsylvania).

444. Bobbitt, F., et al. Curriculum investigations. *Sup. Educ. Monog.*, 1926, No. 31.—Certain fundamental problems of curriculum research are outlined and discussed in the introductory chapter. Following the author's statement that "the research problem which naturally must come first in any comprehensive study of the curriculum of general education has to do with the determination of the major fields of human action," the results of fourteen investigations are reported, the data for which were obtained through statistical treatment of the contents of the Reader's Guide to Periodical Literature, the files of a number of leading newspapers, the Thorndike Word Book, the Encyclopedia Britannica, the Literary Digest, school textbooks and published courses of study, etc. Extensive samplings were used in all cases. In addition to the data obtained from the literature, a summary of the opinions of 111 "leaders of thought" who were interviewed personally, and the results of a questionnaire on play activities which was filled out by 17,379 individuals are presented.—F. L. Goodenough (Minnesota).

445. Breed, F. S. Limitations of the social principle in making a curriculum. *School & Soc.*, 1926, 24, 366-368.—The argument of the paper is that the analysis of adult activities is not an adequate source of materials for the curriculum.—H. L. Koch (Texas).

446. Buckingham, B. R. Adding up or down: a discussion. *J. Educ. Res.*, 1925, 12, 251-261.—Certain experimental evidence shows the advantage of adding downward rather than upward.—S. W. Fernberger (Pennsylvania).

447. Buckingham, B. R. The greatest waste in education. *School & Soc.*, 1926, 24, 653-658.—It is maintained that the greatest waste in education lies not in inefficient pedagogical methods but in the separation effected between the student and things scholastic after he leaves school.—H. L. Koch (Texas).

448. Burnham, W. H. Scientific progress in education in the last fifty years. *School & Soc.*, 1926, 24, 741-747.—It is claimed that education has advanced chiefly in becoming more active, in attacking its problems with scientific tools, in giving attention to individual differences and the development of indi-

vidual powers, in assuming responsibility for the mental and physical health of its charges, and in stressing its autotelic value.—*H. L. Koch* (Texas).

449. **Caldwell, O. W., & Wellman, B.** Characteristics of school leaders. *J. Educ. Res.*, 1926, 14, 1-13.—The basis for choice varied for the activities for which the leaders were chosen by their junior high school classmates. Scholarship was high for all leaders.—*S. W. Fernberger* (Pennsylvania).

450. **Colton, H. S.** Drawing a factor in training of students in a course in general zoölogy. *School & Soc.*, 1926, 24, 463-464.—A report is given of the progress in drawing zoölogical material made by a single class of 249 students, presumably as a result of 6 hours' laboratory work for 4 months. The laboratory routine seemed to raise the standard of drawing-performance of those students who had least success in the initial drawing test, but at the same time to lower the standard of those whose initial accomplishment was greatest.—*H. L. Koch* (Texas).

451. **Department of Education, Japanese Government.** The effect of entrance examination. *Nippon Gakko Eisei* (Japanese School Hygiene), 10, No. 11.—831 children from 4 elementary schools (3 schools for boys, 1 school for girls) who were preparing for entrance examination for middle schools (abstractor's note: Japanese elementary schools end in Grade VI; two more grades corresponding to VII and VIII are given in higher elementary schools to fulfil the minimum requirement of compulsory education. Children preparing for colleges must go to middle schools after the sixth grade has been finished, but due to the limited accommodation of middle schools they must pass a highly competitive entrance examination) were given urine analysis, and it was found that there was a marked increase in protein and sugar in their urine. The amount of increase correlated with the results of the examination. Boys showed greater increase than girls. Among boys greater glucosuria was found where competition was higher; protein, however, showed no difference. From these results it is concluded that boys seem to prepare more for the examination than girls, and suffer from greater mental strain. The repeaters at the examination were shown to suffer more; and the older they were, the more they were affected by the examination, probably due to greater development of emotional reactions.—*J. G. Yoshioka* (California).

452. **Eells, W. C.** The center of population of higher education. *School & Soc.*, 1926, 24, 339-344.—Using a method analogous to that employed by the United States Census Bureau in determining movement of the general population, the author has located the higher educational (college) center of population for each decade subsequent to 1790. The center of higher education has usually been considerably north and east of that of the general population, though, moving as it is at present at the rate of about 60 miles a decade, the former has outstripped the latter in its westward trend by 43 miles. The University of Illinois marks approximately the present collegiate center of education—a locus still 600 miles east of the center of area of the United States. The higher education center for men has always been north and east of that for women.—*H. L. Koch* (Texas).

453. **Fowler, B. P.** Progressive trends in secondary education. *School & Soc.*, 1926, 24, 596-602.—Mr. Fowler champions the revision of the curriculum to meet the social, mental, and physical needs of the individual child; the introduction of the laboratory principle of instruction into all courses; the harmonization of group learning and individual instruction; the capitalization in instruction of the child's fundamental interests; and the education of the parents. He comments on the conservatism of secondary education as contrasted with primary education.—*H. L. Koch* (Texas).



454. **Gates, A. I.** Methods and theories of teaching reading tested by studies of deaf children. *J. Educ. Res.*, 1926, 14, 21-32.—Deaf children used as experimental control group. The present is a preliminary report. The devices used in teaching are described.—*S. W. Fernberger* (Pennsylvania).

455. **Gaw, E. A.** College grades. *School & Soc.*, 1926, 24, 648-651.—The author follows a method outlined by Wood in his *Measurement in Higher Education* for evaluating the scholastic accomplishment of a student by means of a composite measure determined on the basis of the letter grades given him on his courses, the amount of the college work he carries, and his relation to the standard of his class. The method is alleged to be more reliable than the simple letter-grading system and also to throw into relief more effectively individual differences.—*H. L. Koch* (Texas).

456. **Good, M. G.** The sources of Spencer's "Education." *J. Educ. Res.*, 1926, 13, 325-335.—It has been recognized that the second, third and fourth chapters of Spencer's "Education" are merely an excellent exposition of ideas to be found in Fellenberg, Rousseau and others, but especially from Pestalozzi. The author now finds that the first chapter, entitled "What knowledge is of most worth?" contains ideas found largely in the works of Joseph Priestley. Parallel passages are given.—*S. W. Fernberger* (Pennsylvania).

457. **Goodenough, F. L.** Efficiency in learning and the accomplishment ratio. *J. Educ. Res.*, 1925, 12, 297-300.—The accomplishment ratio does not afford a valid means for comparing the learning efficiency of individuals or of groups who differ widely in intelligence.—*S. W. Fernberger* (Pennsylvania).

458. **Griffits, C. H.** The influence of family on school marks. *School & Soc.*, 1926, 24, 713-716.—By means of a correlation technique the resemblance in school accomplishment between sibs adjacent in the family sequence and those non-adjacent was determined. It was discovered that the resemblance of adjacent pairs is considerably greater than that between non-adjacent ones, a fact attributable to the greater diversity of the environmental forces playing upon the more widely separated pairs. School grades are conditioned by the size of the family, the children from small families excelling those from large. Within the family, however, the older and younger children tend to do about equally well scholastically.—*H. L. Koch* (Texas).

459. **Guiler, W. S.** Diagnosing student shortcomings in English composition. *J. Educ. Res.*, 1926, 14, 112-119.—Study of 39 students at Miami University who were failing in English composition. Pressey Punctuation and Capitalization and the Charters Verb and Pronoun Tests were used. An analysis of the results is given. Correction requires individual rather than group instruction.—*S. W. Fernberger* (Pennsylvania).

460. **Haggerty, M. E.** Character-education and scientific method. *J. Educ. Res.*, 1926, 13, 233-249.—Review of the experimental literature on attitudes and character analysis and interests with an appeal for coöperative experimental effort along this line of work.—*S. W. Fernberger* (Pennsylvania).

461. **Hargreaves, R. T.** Adequate education for twentieth century democracy. *School & Soc.*, 1926, 24, 717-720.—Mr. Hargreaves gives an inspirational talk on the complexity of our educational problems and the necessity of meeting them efficiently.—*H. L. Koch* (Texas).

462. **Huber, M. B.** Children's interests in poetry. *Teach. Coll. Rec.*, 1926, 28, 93.—An exhaustive investigation to discover the relative amounts of interest typical children have in a large number of poems. By substantial methods it was found that given poems vary in interest value from grade to grade. There seems a "best" time to present most poems. Some poems are never of great

interest and others are of much interest at any age. Teachers' opinions on what poems interest and at what ages they are of greatest interest do not fully agree with pupil estimates. Purpose of investigation is to determine poetry curriculum and grade placement of poems in actual school work.—*F. B. Knight* (Iowa).

463. **Hutchinson, R. G., & Connard, M. H.** What's in a college week. *School & Soc.*, 1926, 24, 768-772.—About 500 Vassar College students kept daily records for a semester of the time devoted by them to academic work, extra-curricular activities, and exercise. For four weeks they also recorded the hours spent in sleep each night. The average daily distribution of time for the typical week is as follows: Academic work, 5½ hours; extra-curricular activities, 35 minutes; exercise, 40 minutes; and sleep, 7 hours and 55 minutes. Comparisons are made between these data and more or less similar ones collected at the University of Chicago, Mt. Holyoke College, and Bryn Mawr.—*H. L. Koch* (Texas).

464. **Karrer, E.** Reflections on a new method of grading. *School & Soc.*, 1926, 24, 582-584.—A new method is described for grading students on the basis of speed of learning.—*H. L. Koch* (Texas).

465. **Keener, E. E.** Results of homogeneous classification of junior high school pupils. *J. Educ. Res.*, 1926, 14, 14-20.—Homogeneous classification of pupils by the Otis Classification Test proved to be the best way to handle individual differences with the present crowded conditions in the schools.—*S. W. Fernberger* (Pennsylvania).

466. **Kelley, F. J.** Relative amounts of time required for teaching different college courses. *J. Educ. Res.*, 1926, 13, 273-283.—Concludes "... it seems clear that standardizing agencies should give up the use of a single number representing the maximum teaching assignment permissible alike in all departments. (2) The general practice of regarding two hours of laboratory teaching as equivalent to one hour of non-laboratory teaching needs investigation."—*S. W. Fernberger* (Pennsylvania).

467. **Kirk, J. G.** Handwriting survey to determine grade standards. *J. Educ. Res.*, 1926, 13, 181-188.—An attempt to determine the quality of handwriting necessary to meet the social and business demands and from these to determine standards for the sixth and eighth grades. Specimens were rated on the Ayres Scale and the author sets quality 60 as the standard.—*S. W. Fernberger* (Pennsylvania).

468. **Meyer, A. E.** The *Arbeitsschule* in Germany. *Ped. Sem.*, 1926, 33, 508-520.—A survey of historical and contemporary education in Germany indicates that learning by doing is receiving more attention there to-day than formerly and more than in America.—*J. F. Dashiell* (North Carolina).

469. **Narayana Sastry, N. S.** Affectivity for pictorial and for verbal presentation of meanings to school children. *Psychol. Stud. Univ. Mysore*, 1926, 1, 61-63.—It was planned to determine the "relative merits" of pictorial and verbal presentation of meanings in relation to age and schooling. "Merit" is assumed to involve preference by the children, and preference to be indicated by the higher galvanic reflex. Nine pupils of ages from 9 to 20 acted as subjects, and the material consisted of fifteen pictures of varied interest, with titles; the titles were presented first, and the reflex measured for both. The results indicate a change from pictorial to verbal "preference" in the neighborhood of mental age 14. Checking experiments are promised.—*R. R. Willoughby* (Clark).

470. **Oda, S.** The effect on the body of the preparatory drill for the entrance examination of middle schools. *Nippon Gakko Eisei* (Japanese School Hygiene), 11, No. 7.—The chief effects of the preparatory drill for the entrance examination of middle schools on the body are: (1) Malnutrition, and weak de-

velopment of muscles; (2) Loss of weight; the harder the drill, the greater the loss. The children of this age gain in general 8.3 lbs. per year, but more than 25% of boys under drill actually lost weight. (3) Bad effect on blood pressure. A normal physiological increase in blood pressure was interfered with for one year. Boys were affected more than girls. These bad effects are due to mental fatigue from excessive study; fear about the examination; lack of exercise, sunlight, and fresh air; loss of appetite; lack of sleep.—*J. G. Yoshioka* (California).

471. **Osborn, H. F.** *Evolution and religion in education*. New York: Scribners, 1926. Pp. xiii + 240. \$2.00.—The book contains a series of controversial articles in regard to the teaching of evolution, published originally from 1922 to 1926. The author defends the doctrine of the evolution of man, giving evidences, and supports the position that evolution and religion do not conflict. The book contains suggestions on methods of teaching evolution in the schools and on how to restore religion to the schools.—*J. R. Liggett* (Clark).

472. **Pfannkuch, K.** *Geisteswissenschaft statt Philosophie? Gedanken über die Grundlagen der Sprangerschen Pädagogik*. (Mental science instead of philosophy? Opinions concerning the foundations of Spranger's pedagogy.) *Symposium*, 1926, 1, 3, 193-233.—The present day scientific pedagogy in Germany shows in its best known examples a strong trend toward that branch of philosophical doctrine known as "*Kultur*" philosophy (see Kerschensteiner, Litt, Hönigswald, Frischeisen-Köhler, and especially Spranger, whose doctrines are under discussion in this article). According to Spranger's philosophy, pedagogy may hardly expect the pursued systematic synthesis. The design of the philosophical bases of "*Geisteswissenschaft*" has shown that a true grasp of individual significance and independence of concrete reality cannot be expected by means of a forcible feeling of cognition, even though one has taken into account what has not been considered in this essay—the ethical central idea of "*Kultur*" philosophy, the value of which, however, needs more extensive research. This is all the more true as the idea is anchored in a present strong current of German philosophy.—*P. R. Farnsworth* (Stanford).

473. **Snedden, D.** *The lure of abstractions to educators*. *School & Soc.*, 1926, 24, 345-350.—The author decries the use, by educators especially, of many abstract terms, such as "the child," "the curriculum," and "the school," without an intelligent adjectival delimitation of them on the basis of the problem under discussion.—*H. L. Koch* (Texas).

474. **Strayer, G. D.** *The scientific approach to problems of educational administration*. *School & Soc.*, 1926, 24, 685-695.—The author defends the statement that education is a science by describing types, methods, and results of scientific studies in the field of school administration.—*H. L. Koch* (Texas).

475. **Torgerson, T. L.** *Is classification by mental ages and intelligence quotients worth while?* *J. Educ. Res.*, 1926, 13, 171-180.—"From this study we may conclude that the classification of pupils in homogeneous groups according to ability tends to reduce failures."—*S. W. Fernberger* (Pennsylvania).

476. **Trabue, M. R.** *Educational research in 1925*. *J. Educ. Res.*, 1926, 13, 336-344.—Presidential Address before the Educational Research Association. Compares statistically the number of articles and the fields of research for the years 1924 and 1925.—*S. W. Fernberger* (Pennsylvania).

477. **Tsuji, A.** *Scholarship and menstrual period*. *Nippon Gakko Eisei* (Japanese School Hygiene), 12, No. 7.—The results of the study with 62 girls in girls' higher schools and higher elementary schools show that girls having shorter menstrual period do better work in school than girls having longer menstrual period (longer than 6 days).—*J. G. Yoshioka* (California).



478. Washburne, C. The commonest syllables. *J. Educ. Res.*, 1926, 14, 19-205.—A statistical treatment of the syllables in Thorndike's word list gives the most frequently employed syllables in rank order and the number of words in which each is found.—S. W. Fernberger (Pennsylvania).

479. West, P. V. Improving handwriting through diagnosis and remedial treatment. *J. Educ. Res.*, 1926, 14, 187-198.—A plan of diagnosis is given. The Ayres Scale was used. Pupils of 5th and 6th grade make more rapid progress when the diagnostic plan is used than under ordinary procedure.—S. W. Fernberger (Pennsylvania).

480. Wilson, F. T. Some achievements of pupils of the same mental ages but different intelligence quotients. *J. Educ. Res.*, 1926, 14, 43-53.—"The conditions of this study reveal that the pupils of the lower quartile do work more nearly up to their possible achievement than do those of the middle or higher quartiles. The higher quartile falls below its possible achievement more and more as mental age increases." The remedy for this condition is discussed.—S. W. Fernberger (Pennsylvania).

[See also abstracts 258, 274, 282, 359, 373, 434, 438, 487, 489, 490, 491, 492, 493, 495, 499, 506, 507.]

#### BIOMETRY AND STATISTICS

481. Burks, B. S. On the inadequacy of the partial and multiple correlation technique. *J. Educ. Psychol.*, 1926, 17, 532-540.—One of the most desired outcomes of any piece of research is the discovery of the cause of any phenomenon. Many workers in the fields of education and psychology seem to feel that the relations expressed in partial or multiple correlations are causal relations. Only under certain conditions are these relations causal. There are certain conditions when these relations are not causal. Whenever the factor to be eliminated is an effect of either of the two factors whose relation is sought then causal relation can not be posited. Or in the author's own words "In partial correlation, the true measure of contribution of a cause to an effect is mutilated if we have rendered constant variables *which may in part or in whole be caused by either of the two factors whose true relationship is to be measured, or by still other unmeasured remote causes which also affect either of the two isolated factors i.e., (cause and effect).*"—A. M. Jordan (North Carolina).

482. Chapman, J. C. Statistical considerations in interpreting the effect of training on individual differences. *Psychol. Rev.*, 1925, 32, 224-234.—In Reed's article on "The Effect of Training on Individual Differences" it was concluded that training equalizes, rather than increases, individual differences. Reed's statistical procedure of using the ratio of slow to fast groups, before and after practice, is criticized. The units on a performance scale are arbitrary and there is no true zero. A constant, N, would have to be added to the arbitrary scores to get a true scale of values. This would change Reed's ratios; but actually the constant, N, is unknown. It is suggested that product per unit time be used as a measure rather than time per unit product. This view is given a theoretical justification.—P. T. Young (Illinois).

483. Dodd, S. C. A correlation machine. *Indus. Psychol.*, 1926, 1, 46-58.—A discussion of the use of correlation coefficients in business,—insurance, economics, etc. Description of the mechanics of the present machine, illustrated

with drawings. An interesting section is concerned with a discussion of possible future developments of such machines.—*S. W. Fernberger* (Pennsylvania).

484. **Edgerton, H. A., & Paterson, D. G.** Table of standard errors and probable errors of percentages for varying numbers of cases. *J. Appl. Psychol.*, 1926, 10, 378-391.—This table, which has demonstrated its serviceability at the University of Minnesota, should prove useful to research workers elsewhere. It covers numbers of cases from twenty-five to one million. The derivation of the table is explained, and suggestions for its use are given.—*B. M. Morrison* (Kansas).

485. **Rich, G. J.** The measure of approximation of data to the phi-gamma hypothesis. *Amer. J. Psychol.*, 1925, 36, 615-620.—There are two measures of approximation of data which at times yield divergent results. They are based upon somewhat different mathematical assumptions. The more nearly the basic assumptions of a method square with the facts that are to be treated mathematically, the more adequate will the resulting procedure be to the problems that are to be solved. In this respect, Thomson seems to have shown the superiority of his adaptation of Pearson's test for goodness of fit as a measure of the approximation of experimental data and psychophysical hypothesis. Calculation of data for lifted weights by this method fails to show increased approximation of data to the phi-gamma hypothesis as a result of practice.—*G. J. Rich* (Institute for Juvenile Research).

486. **Thomson, G. H.** A note on scaling tests. *J. Educ. Psychol.*, 1926, 17, 551-553.—This note shows that instead of interpolating to locate the fifty per cent. point as recommended by Thurstone it is possible to add all the percentages and divide this sum by 100. The point required is then this quotient subtracted from a point half a year (or half a unit) beyond the top age. A slight extension of this method enables one to calculate *sigma*.—*A. M. Jordan* (North Carolina).

[See also abstracts 303, 314, 341, 389.]

MENTAL TESTS

487. **Banker, H. J.** Age distribution in the grades as a measure of mentality. *J. Educ. Res.*, 1926, 13, 155-170.—Binet data obtained from schools in Oakland, Rochester and Detroit. Chronological age and mental age distributions are made for the classes from the first to the eighth grades. The curves for these two functions are different. Certain prognostic indications are drawn from the results.—*S. W. Fernberger* (Pennsylvania).

488. **Cannon, J. G.** An enquiry into the relative values of the inventive and selective forms of group tests of mental capacity. *Australasian J. Psychol. & Philos.*, 1926, 4, 141-149.—Used four tests—analogies, completion, similarities and opposites—on 95 children from 9 to 13 years old. He finds that the selective test is at least equal, if not superior, to the inventive form. The selective form is to be preferred from the point of view of administration.—*S. W. Fernberger* (Pennsylvania).

489. **Cavins, L. V.** An experiment with standardized tests in a state teachers' examination. *J. Educ. Res.*, 1926, 14, 206-212.—Instead of the usual content examinations in many subjects, the author employed a battery of standardized tests, including the Pressey Diagnostic Test in English Composition, Pressey-Richards Test in American History, Buckingham-Stevenson Test in U. S. Geography and Stevenson-Ridgley-Shipman Tests in European Geography. These

proved to be more valuable than the content examinations inasmuch as they permit an objective rating of teachers, they introduce teachers in a concrete way to the movement of educational tests and measurements and they permit a ready method of analyzing and diagnosing an individual's specific and general weaknesses in various subjects.—*S. W. Fernberger* (Pennsylvania).

490. **Chambers, O. R.** Character trait tests and the prognosis of college achievement. *J. Abn. & Soc. Psychol.*, 1925, 20, 303-311.—“This study represented an attempt to determine whether college achievement could be foretold on the basis of the Pressey X-O Tests, and if so, to what extent; and whether such character trait tests when used in conjunction with an intelligence test would materially raise the correlation existing between such test scores and scholastic achievement. The very unusual materials and methods of the X-O tests were found capable of yielding results of appreciable significance with regard to certain practical problems. There seems to be excellent ground for continuation of work along this line, with the expectation that instruments of much greater adequacy for the measurement of extra-intellectual traits may be developed.”—*E. F. Symmes* (Boston Psychopathic).

491. **Fauth, E.** Testuntersuchungen an Schulkindern nach der Methode des fortlaufenden Addierens. (Test studies on school children by the method of continuous addition.) *Arch. f. d. ges. Psychol.*, 1925, 51, 1-20.—1,200 elementary school children (boys and girls in all 8 grades, in city and country) were required to add continuously in writing for 6 minutes: always two presented numbers by the use of the Kraepelin sum-book. The performance in addition on the average depends upon age, with which it increases at first quickly, and then always more slowly. Boys on the average do better than girls, those in their 13th year excepted; the country children likewise surpass the city children. There was a relation between grades in arithmetic and addition. The average result of the best pupils amounts to at least double that of the output of addition in the poorest pupils. The values for the grades 2, 3 and 4 fall off regularly. Quantitatively inferior performance is regularly associated with qualitative deficiency; a superior quality of performance is not found to compensate for a small quantity of production. The test value of continuous addition with shorter working time is warranted by this study.—*R. Tauli* (Munich).

492. **Gates, A. I.** The Gates primary reading tests. *Teach. Coll. Rec.*, 1926, 28, 146.—A battery of reading tests to determine diagnostically the level at which pupils' reading skills break down in a general hierarchy of reading habits. The three levels used are: (1) word recognition, (2) phrase and sentence reading, (3) paragraph mastery. The words used in all test forms are rigorously selected by an adequate set of ten criteria. Presumably this is also true of types of sentence structure used. The reliability of each test form is fairly satisfactory. Remedial procedures following diagnosis of reading difficulty will differ for such instances as: pupil is high on levels 1 and 2 (above) but weak at level 3; pupil is weak on both levels 2 and 3 but high on 1; pupil is weak on all three levels of reading ability used in the tests. Two forms of these tests are available.—*F. B. Knight* (Iowa).

493. **Hughes, W. H.** Relation of intelligence to trait characteristics. *J. Educ. Psychol.*, 1926, 17, 482-497.—Composite ratings for quickness of thought, memory, force of personality, capacity of leadership, initiative-aggressiveness, control of attention, self-confidence, sense of accuracy, cooperativeness, regularity-persistency, trustworthiness, and respect for authority have been recorded for pupils of a large high school over a period of years. Furthermore the pupils were tested by Terman Group Tests of Mental Ability. The immediate purpose

of this paper is to point out the reliability of the composite estimates of character traits when the composite is made up of the estimates of five or six teachers, and the relationship of these estimated traits to intelligence. The range of the coefficients of reliability of the traits mentioned above varied from .64 (control of attention) to .47 (group leadership) when the estimates were for pupils of a large high school, but when the pupils were from a smaller high school the coefficients ranged from .74 (regularity-persistency) to .56 (self-confidence). When these composite estimates are correlated with intelligence scores they range from .42 (quickness of thought) to .13 (respect for authority).—A. M. Jordan (North Carolina).

494. Kirahara, H. Development of intelligence and social factors. *Rhodokagaku Kenkyu* (Study in the Science of Labor), 1, No. 2.—1,000 boys and 900 girls in the elementary schools in Okayama prefecture, Japan, were given 5 group tests. The scores were compared with the norms established with the same tests with 2,500–12,000 unselected school children in the same district. The results showed that the children from wealthy homes are superior; their median lies between 70% and 80% of the scoring scale. The children from the homes of the middle class are between the superior and inferior groups, their median being between 50% and 60%. Within the inferior group made up of the children of the laboring class, the children of farm laborers and of migratory laborers are the worst; the children of artisans and skilled laborers are moderately good. These scores show no correlation with the difference in schools, age, number of children in the family, the order of birth, and the age of the parents. Correlation was found, however, between the scores and home conditions conducive to the development of intelligence.—J. G. Yoshioka (California).

495. Lämmermann, H. Bericht über die Eichung einer Serie von Gruppentests für acht- bis vierzehnjährige Volksschüler. (Report on the standardization of a series of group tests for eight to fourteen year old school children.) *Zsch. f. angew. Psychol.*, 1926, 27, 1–41.—Group testing of 1,592 pupils with the purpose of standardizing a series of tests which should be used in the psychological tutoring examinations introduced into the Mannheim *Volksschule* several years ago. It deals with a test series which is standardized for complete class gradations of the *Volksschule* with the exception of the first school year. The series is not devised in a one-sided manner for the examination of poorly gifted or feeble-minded children, but is also suited for the selection of superior pupils.—P. Plaut (Berlin).

496. Langlie, T. A. Analysis of the Iowa placement tests. *J. Appl. Psychol.*, 1926, 10, 303–314.—This article presents a detailed statistical analysis of the results secured by giving the Iowa Placement Tests (composed of an "aptitude" and a "training" test in English, Mathematics, and Chemistry) and the Minnesota Intelligence Tests to freshmen entering the College of Engineering and Architecture, University of Minnesota, in September, 1924. The method of partial correlation is used extensively. It is found that the tests under consideration do differentiate fairly well, except the Chemistry aptitude test. The results indicate that there is no real difference between "aptitude" and "training" in any of these particular subjects, aptitude being general intelligence plus training. The author concludes that the factors measured by these tests are: a. General intelligence, as measured by tests in current use; b. Training in particular subjects, especially Mathematics and Chemistry; and c. Mathematical aptitude (which may be termed intelligence plus training in Mathematics).—B. M. Morrison (Kansas).

497. Laslett, H. R. Preliminary notes on a test of delinquent tendencies. *J. Delinq.*, 1925, 9, 222–230.—An analysis is made of the possible bases for de-



linquent tendencies in children. A list of words to be used with the free association method is presented. Some scores are given. Age norms, etc., are still to be determined.—*S. W. Fernberger* (Pennsylvania).

498. **Malmud, R. S.** *The controlled vs. the free completion.* *Amer. J. Psychol.*, 1925, **36**, 401-411.—The controlled completion test (in which the alternatives are given from which responses are to be chosen) is an improved instrument in what it measures and in the accuracy with which it measures it. It is a better measure of language ability and a finer index of general intelligence than the free completion test. As a language scale it may be more accurately graded.—*G. J. Rich* (Institute for Juvenile Research).

499. **Peters, C. C.** *A method for computing accomplishment quotients in the high school and college levels.* *J. Educ. Res.*, 1926, **14**, 99-111.—Results of tests of 1,300 students at Ohio Wesleyan University. The present methods for calculating such quotients are not valid beyond the lower school grades. The formula is given. The author finds a negative correlation, as is the case with the lower grades also, between accomplishment and intelligence. Appendixed is a discussion of the author and A. S. Otis regarding the formula.—*S. W. Fernberger* (Pennsylvania).

500. **Peterson, J.** *What intelligence tests are based upon.* *Indus. Psychol.*, 1926, **1**, 569-579.—A readable description of the origin and development of intelligence tests from the time of Francis Galton, together with a short discussion of theories of the nature of intelligence, the constancy of the intelligence quotient, and the limits of mental growth.—*A. T. Poffenberger* (Columbia).

501. **Pintner, R.** *Accuracy in scoring group intelligence tests.* *J. Educ. Psychol.*, 1926, **17**, 470-475.—Two experimental blanks of the National Intelligence Test, Scale B, were made up to include various types of mistakes which children make in answering the items. At the first these blanks were carefully gone over and scored by the writer and his assistants. One of the blanks was then submitted to a class of graduate students with a remarkable variety of results. The scores ranged from 3 to 85. But neglecting two freak scores of 3 and 18, they ranged from 34-85, a range in mental age from 7 to 11. After the class had pursued the study of tests and measurements for a term the range on the second blank was from 58 to 90, a range from 8 years and 10 months to 11 in mental years. There appeared to be a constant error in the negative direction, the average difference from the true score being — 9 at the beginning of the term's work and — 3 at the end. Training seemed greatly to improve errors in adding totals, and in crediting stereotyped responses. Errors arose, for the most part, because students failed to pay enough attention to the details of the directions for scoring, but rather launched out on their own initiative.—*A. M. Jordan* (North Carolina).

502. **Quadfasel, F.** *Die Methode Fernald-Jacobsohns, eine Methode zur Prüfung der moralischen Kritikfähigkeit—und nicht des sittliche Fühlens.* (The Fernald-Jacobsohn method, a method for testing moral critical ability—and not the traditional feelings.) *Arch. f. Psychiat. u. Nervenkr.*, 1925, **74**, 1-38.—The author used the following examples for the Fernald test: (1) Some one took a penny from a blind man's hat, (2) Some one broke in window panes, (3) Some one fired at a fleeing man whom he had attempted to rob, (4) Some one, who was an official, took some money, (5) Some one took two or three apples from an orchard. The original must be consulted for other experimental conditions (questions of proof, etc.). For group studies in the schools blank forms have been printed. In addition the intelligence was tested with the aid of the Ebbinghaus tests, two arrangement tests and a critical test (unfortunately the

method used for the problem of differentiation is not given, and in this case according to my experience it is particularly important). In all there were tested more than 50 adults, 778 children, and elementary school pupils, high school pupils, and pupils in custodial schools (429 boys and 349 girls). The author then accepts a "determination" of the results if  $\frac{3}{4}$  or at least  $\frac{2}{3}$  of the subjects have placed an offence at the same place. Under the general results it should be emphasized, according to the author, that "an influence of the moral feelings in the solution of the Fernald test was not established," that "the test to a greater degree tests the critical ability to make comparisons in the moral field." It may be finally mentioned that, as the author himself states in the concluding observations, the offences presented for judgment are too heterogeneous. Therefore in my work on the nature of this problem (2. Aufl. 1920, S. 36) which the author has not considered, I have used homogeneous examples. At all events the careful work of the author deserves every consideration on the part of the psychologist.—*Th. Ziehen* (Halle a/S.).

503. **Remmers, H. H., & Plice, M. J.** Reliability of ratings at Purdue University. *Indus. Psychol.*, 1926, 1, 717-721.—A test of a student rating system installed at Purdue University in 1920 for the benefit of students and prospective employers. Ten traits were rated by teachers and fellow students, and in addition the Scott Mental Alertness Test was administered. As is usually the case, the reliability of the test was high (+.96) while that of the ratings was low (varying around +.50). The investigators think that the ratings have some value and give recommendations for increasing their usefulness.—*A. T. Poffenberger* (Columbia).

504. **Rich, G. J.** A scale for scoring tests with alternative answers. *Amer. J. Psychol.*, 1925, 36, 597-600.—A scale for scoring tests with alternative answers is suggested, in which the successive steps are inversely proportional to the probabilities of obtaining the respective values by mere chance (guessing), and in which every value is obtained according to a homogeneous mathematical formula.—*G. J. Rich* (Institute for Juvenile Research).

505. **Tinker, M. A.** Intelligence in an intelligence test with an auditory distractor. *Amer. J. Psychol.*, 1925, 36, 467-468.—A distraction (ringing of a bell) during a mental test appears to hinder those who do well on the test and to aid those who do poorly on it.—*G. J. Rich* (Institute for Juvenile Research).

506. **Whinery, S. M.** Psychological test ratings and college entrance age. *School & Soc.*, 1926, 24, 370-372.—The freshmen in arts, philosophy, and science whose scores on the Ohio State University Psychological Examination fell within the lowest and highest five per cent. were studied in regard to age at college entrance. The high-ranking group were discovered to be approximately  $1\frac{1}{3}$  years younger than the low-ranking, as well as less variable in age. Explanations for the phenomenon are suggested.—*H. L. Koch* (Texas).

507. **Woodrow, H.** A picture-preference character test. *J. Educ. Psychol.*, 1926, 17, 519-531.—An attempt is made to measure certain phases of character by means of having the subject designate which of four pictures depicting differing degrees of moral turpitude he likes best. The test consists of eleven pages of pictures arranged in series, four to the page. For example, one act might illustrate orderliness or disorderliness, another, good and bad ways for boys to fight; while yet another, the coöperative attitude towards one's mother or the opposite. The tests were given to 648 children in order to decide on the method of scoring and the order in which children themselves liked the pictures. Once the order is determined scoring becomes easy. The test proved fairly reliable ( $r = .79$ ,  $N = 95$ ). It correlates with M. A. (Kuhlman), —.24 with chronologi-

cal age constant (minus 24 because the character test scores are error scores). In general the correlation between character traits and intelligence scores is pronounced. Further efforts towards validation were made in correlating the character test scores with teachers' estimates. This preliminary study shows possibilities and heartens the author to continue the refinement of the test's technique and to investigate further its usefulness.—*A. M. Jordan* (North Carolina).

[See also abstracts 258, 271, 285, 324, 333, 378, 388, 390, 393, 399, 439, 443, 485.]





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**Journal of Educational Psychology**—Baltimore: Warwick & York.

Subscription \$4.00. 540 pages ann. Founded 1910. Monthly (9 numbers). Edited by Harold O. Rugg and coöperating board.

**Psychoanalytic Review**—Washington, D. C.; 3617 10th St., N. W.

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